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[An Analysis of Regional Planning Agencies in California Funded by ESEA Title III: Report to the Educational Agencies in California from a Statewide Advisory Committee. Volume I. A Study of the Regional PACE Centers. Volume II. A Study of the Regional Data Processing Centers. (2 pieces)]

Little (Arthur D.), Inc., Boston, Mass.; San Jose Unified School District, Calif.

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This comprehensive study evaluates the ESEA Title III Regional Planning and Evaluation Agencies in the State of California. The study is prepared and reported in two volumes: One evaluating the 21 Projects to Advance Creativity in Education (PACE) Centers and the other evaluating the 10 Regional Educational Data Processing (EDP) Centers. Analysis of the PACE Centers includes evaluation of ESEA Title III and the educational change process, descriptions of major elements of California's educational system and the relationship of these elements to the educational change process, evaluation of the individual PACE Centers in California, and several appendices showing methodology and data used in the analysis. The volume evaluating the EDP Centers describes the history and operation of the system, presents an analysis of services and costs of the system, and discusses program development and the funding of individual centers. Both volumes present conclusions and recommendations in a convenient beginning section. (TT)

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AN ANALYSIS OF REGIONAL PLANNING AGENCIES IN CALIFORNIA FUNDED BY ESEA TITLE III:

A Study of the Regional PACE Centers

Volume I

REPORT TO THE
EDUCATIONAL AGENCIES IN CALIFORNIA
FROM A STATEWIDE ADVISORY COMMITTEE

AND

AN ANALYSIS OF REGIONAL PLANNING AGENCIES
IN CALIFORNIA FUNDED BY ESEA TITLE III,
1968, BY ARTHUR D. LITTLE, INC.

EA 002 251

SAN JOSE UNIFIED SCHOOL DISTRICT
SAN JOSE, CALIFORNIA 1968

The work presented or reported herein was performed persuant to a Grant from the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

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As Amended 7/26/68

BRIAN & RALPH SAN JOSE

FOREWARD

Purpose of the Analysis.

Since the Title III Guidelines of the Elementary and Secondary Education Act, PL 89-10, call for an evaluation of all projects funded from this source, the Regional Planning and Evaluation Agencies (RPEA) now known as PACE Centers (Projects/Programs to advance Creativity in Education) or Supplementary Education Centers, were faced with the problem of conducting an evaluation of their activities. When this problem was first discussed in January 1966, the decision by the directors of these centers, the State Department of Education, and the U.S. office of Education, was to conduct the evaluation through a joint effort. In addition, the California Regional Data Processing Centers and their linking system obtained a large share of "start up" funds to establish this system from ESEA, Title III, and as they generally were also Regional Agencies, they were invited to participate in the cooperative evaluation. Thus a separate Title III project was jointly prepared to carry out the evaluation of both systems. It included several important provisions:

(1) The evaluation was to be made utilizing the services of a nationally prominent research management firm.

(2) A nation-wide advertising was conducted calling for bids to design and to submit a research proposal to carry-out the analysis and the evaluation based on criteria and questions developed by a state-wide Advisory Committee.

(3) This committee represented the many groups at the different levels of effort and organization in California.

(4) Recommendations for change were also a part of the responsibility of the contracting management firm.

Role of Sponsoring District.

The project was sponsored by the San Jose Unified School District as a management function for the organizing of the Advisory Committee, the awarding of the bid, the research and the comprehensive visitations made, the completion of the necessary detail, and the distribution and publication of the final, approved report. The district did not have any other major ESEA, Title III project during the period, and was not involved with direct services of regional data processing centers. This project defined the district's role as that of an impartial cooperating agency.

Dr. George M. Downing, superintendent, accepted this responsibility with the approval of the Board of Education as a contribution by the district toward the improvement of education in California.

Evaluation Role of Advisory Committee.

The same requirement which instituted the analysis of these agencies also applies to the analysis itself since it too is a Title III funded project. Thus,the state-wide Advisory Committee was instituted to carry out the functions which are subsumed in this requirement. The following pages details this work which was carried out in this manner:

(1) Setting bidding specifications and defining the questions for the analysis to be made within a scope or frame of reference. These areas were incorporated in the Request for a Proposal (RFP), which is also included in the following pages.

(2) Receiving, discussing, and reviewing specified interim and final reports under a negotiated contract by the sponsoring district with Arthur D. Little, Inc., the contractor.

(3) Defining and aiding in the implementation of policy for the on-going work of the administrative and the analytical teams in the project period, February 1968 to November 30, 1968.

Disclaimer for Sponsor and Committee.

Although the Advisory Committee reviewed all aspects of the study and provided the coordinating office with "feed-back" and means of reliability checking of the work carried out in the various areas of the state, the conclusions and the recommendations expressed in the report are not necessarily those of the Committee or the district, but are in reply to the statements to the bidders in the Request for a Proposal under the section: A. Scope of the Study.

Distribution of the Report.

Distribution of the report included members of the Advisory Committee, all school districts and county offices of education in California, the U.S. Office of Education, the State Department of Education, the State Legislature, California congressmen, and colleges and universities in the state. Copies were also made available for each of these regional agencies, their boards of directors, and the state advisory committees which exist with intrest in PACE and in Regional Data Processing activities.

A copy of the report has been sent to the ERIC Clearinghouse for research in Educational Administration at Eugene, Oregon and should be available in the regular fashion through distribution channels of the ERIC system.

This is the only distribution made by the San Jose Unified School District; additional copies are not available from the sponsor or from the contractor, Arthur D. Little, Incorporated.

ADVISORY COMMITTEE FOR PROJECT TO ANALYZE THE REGIONAL PLANNING AGENCIES AND THE DATA PROCESSING AGENCIES FUNDED UNDER TITLE III, P.L. 89-10 IN CALIF.

##	Dr. Justin Bardellini	Mt. Diablo Unified School District. Administrative Assistant
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##	Dr. Harry Blair	Kern County Schools, Superintendent
##*	Dr. William Clinkenbeard	Los Angeles County, Title III Center, PACE Director
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##	Dr. George Downing	San Jose Unified School District, Superintendent
##	Dr. G. W. Ford	San Jose State College, Professor of Education
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##	Dr. Leonard Grindstaff	Riverside County Schools, Superintendent
##	Dr. Alvin Grossman	Representative of State Superintendent of Instruction, Chief Systems and Data Processing
##	Dr. Richard Hammerle	Los Angeles City Schools, PACE Director (1968-69)
##	Robert Hansen	Fresno Unified School District, Administrative Assistant and Director of Planning and Research
##	Dr. Cecil D. Hardesty	San Diego County Schools, Superintendent
##*	Peter A. Hartman	San Jose Unified School District, Project Coordinator, Study of California Regional PACE and EDP Centers

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#	Dr. Roy C. Hill	San Bernardino County Schools, Superintendent
##*	Robert Howe	State Department of Education, Educational Data Processing Project, Coordinator
##	Dr. James Jensen	University of California, Head of Field Services
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##	Edmund L. Lewis	California School Boards Association, Assistant Executive Secretary
##*	Dr. H. D. Lovik	CASA Representative and Visalia Unified School District, Superintendent
##	Charles F. Parsons	Roseville Joint Union High School District, Superintendent
##	Dr. Glen Paul	Humbolt County Schools, Superintendent
##	Robert Scheirbeck	Dixie School District, Marin County, Principal
#	Dr. David Schwartz	Los Angeles City Schools, PACE Director (1967-68)
#	Revernd Dan Towler	Los Angeles County Schools, Board Member
##	Loren A. Wann	Representative of State Superintendent of Instruction, Field Representative, School Administration
##	George Wilkenson	Alameda PACE Center, Director
##*	Blaine Wishart	Educational Resources Agency, Title III, Director, Sacramento

* Member of Proposal Evaluation Committee.

## Indicates individual regularly attended or sent an alternate.

# Only attended meeting which developed the specifications and questions for the study.

INDIVIDUALS WHO WERE KEPT INFORMED OF THE PROGRESS OF THE STUDY AND WHO WERE INVITED TO ATTEND ALL MEETINGS

	Dr. Laurence Belanger	Program Planning Consultant, Division of Instruction, State Department of Education
	Dr. Charles S. Benson	State Commission on Public Education, State Department of Education, Professor of Education, School of Education, University of California, Berkeley
	Mr. Wallace H. Burt	Consultant in Program Planning and Development, State Department of Education
	Dr. Everett T. Calvert	Deputy Superintendent of Public Instruction State Department of Education
	Dr. N. L. Gage	Center for Research and Development, Stanford University
	Dr. John Hemphill	Director, Far West Laboratory
##	Dr. Glenn Hoffmann	Superintendent, Santa Clara County Schools
##	Dean, H. Thomas James	School of Education, Stanford University
	Dr. Donald W. Johnson	Coordinator in Program Planning and Development, State Department of Education
	Dr. Donald E. Kitch	Chief Supplementary Education Services, State Department of Education
	Dr. Leland Medsker	Center for Research and Development, University of California
##	Mr. Donald Miller	Operation PEP, San Mateo County Superintendent of Schools
	Dr. Calvin Nichols	Program Officer, Supplementary Centers of Region 9, San Francisco Regional Office, U.S. Office of Education
	Dr. Robert O'Hare	Element Head, Educational Resources Services, Southwest Regional Laboratory
	Mr. Merryl Powell	Director, Instructional Laboratory Title III, ESEA, Program Planning and Development, State Department of Education

Dr. Max Rafferty	Superintendent, Public Instruction, State Department of Education
Mr. John Thorslev	Contracts Officer, San Francisco Region 9, Department of Health and Welfare, U.S. Office of Education
Dr. Lee Wickline	Assistant Director, Division of Plans and Supplementary Centers, U.S. Office of Education
Dr. Merlin C. Wittrock	Director, Center for Study of the Evaluation, Instructional Programs, University of California

Indicates individual regularly attended or sent an alternate.

Chronology of the Project

January 1966	Agreement to carry out an analysis reached cooperatively by the PACE, EDP, State of California and USOE agencies involved in PL 89-10, Title III funding in California.
January 1967	Proposed project written by representatives of the PACE and the EDP agencies submitted by San Jose Unified School District as a Title III project to analyze these systems.
May 1967	Statewide Advisory Committee formed and met to develop specifications, questions, and the rationale for the analysis and to begin to formulate policy for project.
July 1967	Addendum to project application submitted with the precised specifications now approved by the full committee for the bidding to satisfy the questions and within the scope of activity in which the contracting firm would operate.
February 1968	Project approval received for fiscal 1968 with funding period to cover activities of Advisory Committee, subcontractors for the analysis and for publication, and the sponsoring district's coordinating, administrating functions.
March 1968	Nationally advertised request for the Request For A Proposal resulted in a pre-bidding conference on March 19, 1968 attended by fourteen management firms. Six of these firms submitted proposals in response to the ten bidding specifications which were used for evaluation of the proposals. Bids were received on March 29, 1968.
April 1968	Arthur D. Little, Inc. was awarded the bid for the management firm work under the specifications following an evaluation of the six proposals by the specification subcommittee of the Advisory Committee. Mr. Peter Hartman was employed by San Jose Unified School District as the project coordinator to perform the necessary liaison functions among the agencies and the contractors to the district. A separate project office was opened.
May-July 1968	The preliminary phases of the study included: initial field visits were made by Arthur D. Little teams; contractor reviewed data base materials collected from agencies with the cooperation of the directors of each of the two systems: PACE and EDP; questionaires and other data collection devices and protocols were established.

	The Advisory committee reviewed questionaires and procedures on July 10, 1968 and reacted to the first set of data gathered in the field as well as to the methods and the activities carried out with respect to their representative educational agencies at that time. Progress reports were issued to this committee on a monthly basis by Arthur D. Little, beginning in June.
August 1968	The fourth progress report was reviewed at a meeting of the Advisory Committee; data were reviewed and discussed on August 20, 1968. Additional information was gathered from clients and other educational patrons of the two systems; majority of site and client visitations were completed with the approval of the Committee. Follow-up activities were specified for areas of concern; agreement was reached with contracting firm to further define certain areas and to complete data analysis.
September 1968	Statewide Advisory Committee met to analyze and to discuss the working draft of the final report on September 24-25, 1968. Recommendations for organization of report and suggestions with alternatives to certain presentations were detailed and presented as agreements between the firm and the committee. Approval of the contract's fulfillment was indicated by the committee contingent upon the firm's completion of these specified areas of agreement.
October 1968	Authur D. Little submitted to the augmented specification team, a subset of the Committee, the detail and format of these changes; annotations and conferences were carried out through the Coordinator's office with the contractor in meetings and on-site district representation at the two writing team offices of the contractor.
November 1968	The final report as defined above was submitted to the Committee; minor articulation of detail was carried out. All Advisory Comitee members were contacted for reactions and to ascertain that the specifications detailed in September were satisfied for the completion of the contract. Decision was made by the specification group to publish separate volumes for the PACE and EDP analyses in order to cover the widest set of publics involved. Contract for publication and for distribution of these volumes was awarded by the San Jose Unified School District.

December 1968	Coordinator's office was closed.
January 1969	Distribution of report completed; project terminated by district.

INVITATION TO SUBMIT A PROPOSAL TO PROVIDE RESEARCH AND CONSULTATION FOR THE ANALYSIS OF CERTAIN FEDERALLY FUNDED AGENCIES IN CALIFORNIA, 1967-68

A. Scope:

The research firm is requested to submit a proposal to make a thorough analysis of the regional planning Agencies funded by ESEA, Title III, PL 89-10 in California. These agencies are defined to be the Regional PACE Centers and the Regional Data Processing Centers. The firm is further requested to make recommendations for legislative, regulatory, or administrative changes or procedures to solve the problems or to ameliorate the situations which are defined as the result of the analysis. In support of its findings and recommendations, the firm will be expected to provide valid and appropriate data in answer to several sets of questions related to these funded agencies and other existing educational agencies in the state.

Consideration of the goals and the purposes of these sets of agencies, both those in the focus of the analysis as well as those with which there are relationships in California, shall be part of the determination of the reasonable answers. These answers shall cite the advantages, the disadvantages, for the possible alternatives for each of the various PACE or Data Processing agencies involved with reasonable prediction for the consequences of the selection of each alternative.

Questions are listed in two groups with indicated priority for action: 1.1-ff1: First; 2.1- : Second.

B. Questions Related to the Data Processing Centers:

1.1 Is there greater cost effectiveness involved in the operation of one central installation in a region rather than another type of organization or composition of an installation or installations?

1.2 Is there a difference in the level of central staff competency associated with these data processing centers in a regional system than is possible in other types of data processing agencies, such as school district, county, university, or private organizations serving this field?

1.3 What are the desirable limits in uniformity in the procedures and in the products of these regional centers? In what ways are these different from those limits which are possible under other arrangements and through other agencies whose function is also data processing in this state?

1.4 Is there provision for the adequate funding for data processing by the agencies and/or districts which require and utilize the data at the local, the regional, and the state levels? What should the fair share of the associated and the direct cost of this processing be for the distribution of funds toward this production itself as opposed to costs for work in systems analysis and in the development of programs to provide more flexibility and individual options by these users?

1.5 What provision should there be for adequate, effective safeguards for the integrity of the participating districts and/or agencies in the availability of and in the treatment of the data as it is processed and is transmitted in the system? To what degree has this protection been achieved at this state of development of the system(s)?

2.1 Is the basis for grouping of the clients and prospective clients for these data processing centers adequate for the defined programs?

2.2 To what extent do the various cooperating agencies and/or districts involved in a regional system make and implement valuable suggestions to the developments and to the changes of the system itself?

C. Questions Related to the Regional PACE Centers:

1.1 What share of enabling funds provided for the operation of these centers should be specified for planning activities as compared with the share that is allocated for the operation of projects that are directed toward satisfying the client needs in a region? Is the present allocation of these shares reasonable for the center(s)?

1.2 Is there regional participation in the determination of and in the actual assignment of priorities for the activities, including the project of the centers?

1.3 What evidence supports or denies the effectiveness of these planning centers in terms of:

(a) the community outside of the school districts and the state school system?
(b) the involvement of the schools and other community organizations in decision making?
(c) the process by which needs have been identified and involved in the center(s) activities?

(d) the outcomes of center activity as indicated by projects, the recipients of projects, or other specified activities which involve regional clientele.
(e) the manner in which priorities are determined?

1.4 What identifiable changes have occured in the client service area in terms of attitudes, procedures, and improved instructional or pupil performance programs? To what extent are these clients as attributable to the program(s) of the center(s)?

2.1 In what ways are the bases for grouping of the clients of the centers sound in terms of the needs of these patron agencies? Should the basis of satisfying these needs be through a definable number of institutions or a combination of such institutions?

2.2 Is the staffing pattern of the center(s) appropriate for their roles and their specified objectives?

2.3 What number and relative per cent of districts or agencies participate in projects in the region? What number and relative percentage of projects are initiated outside the center by these client organizations? How is this number and per cent, in each case, related to the number of students to be served directly, or indirectly by these projects? What relationship does the size and the geographical proximity of the center of the participating districts bear to these activities?

2.4 Are the identified needs being met by the project(s) clearly defined and are efforts being made to communicate the intent(s) of the project(s) to the region's clientele and interested citizens?

2.5 How effective are the Boards of Directors of the center(s) in relationship to the role and the objectives of the center(s)?

D. Questions Related to both the PACE and the Data Processing Centers:

1.1 Should there be a merging of these two agencies in view of the data developed in this analysis and the suggested courses of action?

1.2 What are reasonable sequences of action for these centers within the current time span that is specified for the present funding sources which are available to them?

2.1 To what extent is there an over-lapping of the roles and the objectives of these two sets of regional agencies?

2.2 What is the need for a structural reorganization in the region, in the area, or in the state beyond the specified center itself to accomplish the purposes which are involved in the educational system of the state?

E. Conditions:

1.0 The research firm will furnish reports at regular intervals as required by the Advisory Committee to the project and provide data to aid this committee in evaluating the conclusions and recommendations made by the firm.

2.0 The research firm will complete the study and submit a final written report in 50 copies by the date established by the applicant agency; this report shall follow the format and the recommendations made on an interim report to the Advisory Committee. The research firm shall agree to withhold release of any information to other agencies or public(s) until the final report has been made to the Committee and is published by a separate subcontractor for the applicant agency.

3.0 The research firm will obtain Committee approval of the composition and the design of the study.

4.0 The research firm will respect the confidential and anonymous nature of all information where appropriate and possible.

5.0 The research firm will begin its work by the time stated in its proprosal which shall be within 30 days after a contract is approved.

6.0 The research firm will provide the necessary staff and material to perform the study as proposed.

7.0 The research firm will have available the staff of the separate centers and the administrative staff of the project for interviews, discussions, and consultation as staff time permits.

F. Proposal:

You are invited to submit a proposal to be incorporated as part of the contract setting forth the following, but not limited to the specific questions which are stated for the funded agencies. Concern and provision for the formal external analysis of the centers and their systems and the recommendations for appropriate action to provide more effective and more efficient solutions for the problems and situations should include these factors:

(a) the purposes, the goals, the functions, and the methods of operations of the center(s).

(b) the description of current multiple organizational patterns, operational strategies, and fundamental issues related to these centers.

(c) the levels of governmental authority.

(d) the developing structures and the organizations of the centers.

(e) the total information and communications process of the state educational systems.

(f) the required qualifications, responsibilities, salaries, and numbers of personnel in the centers.

(g) the evaluation processes of center operation.

(h) the funding of projects with which these centers are involved.

AN ANALYSIS OF REGIONAL PLANNING AGENCIES IN CALIFORNIA FUNDED BY ESEA TITLE III:

The Study of the Regional PACE Centers

Report to
SAN JOSE UNIFIED SCHOOL DISTRICT

October, 1968

C-70401

Arthur D. Little, Inc.

STUDY OF REGIONAL PACE CENTERS

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INTRODUCTION

This is a report of the evaluation study of California's Regional Supplementary Educational Centers. Since these 21 Centers are funded by Title III of the Elementary and Secondary Education Act (ESEA) of 1965, and since Title III is called "PACE" (Projects to Advance Creativity in Education), they have become known as "PACE Centers." This study, together with the companion study of the State's Regional Data Processing Centers, was carried out under a Title III grant awarded to the San Jose Unified School District. Our contract was with that district. District administrators arranged for the definition of study specifications and monitored our performance to those specifications throughout the course of the study.

In response to the Request for Proposal issued by the San Jose Unified School District with the assistance of the Study Specifications Committee, we designed the study to address issues of probable interest to several different "publics": the Congress of the United States, the U. S. Office of Education, the California State Legislature, the Governor, the State Board of Education, the Department of Education, the PACE Centers and EDP Centers, the intermediate units, the school districts of the State, and the statewide Study Advisory Committee. This report attempts to group our conclusions and recommendations so as to serve the information needs of those several levels of parties-at-interest.

It is a stimulating experience to work with the caliber of people with whom we were in contact during this study. It was exciting to see what has happened of such actual and potential significance in the very few years since ESEA was but a hope in the hearts of a "think group." It has been a satisfying experience to engage in a study which possibly can result in improved educational opportunities for so many.

We have come to regard ESEA Title III as "the leverage title." If adequately funded and managed, the contributions from projects supported by Title III funds can have manifold and far-reaching effects for years to come. We hope this report adequately reflects the promise, as yet only half-fulfilled, we see in both the title and the PACE Centers.

Several sections of the report on the PACE Centers, Chapter III, Sections B and G of Chapter IV, and parts of Chapter I, reflect information and findings we developed in a number of other studies of California's education system. We do not apologize for these reflections. On the contrary, we believe that prior experience has enabled us to place the findings from this study in a perspective which contributes to improved understanding. Further, we have used the names of people who importantly influenced the development and administration of ESEA Title III, both nationally and in California, thus affecting the style and effects of PACE Center organization and operation in the State. We also name individual projects and PACE Centers which exemplify certain salutary characteristics. We believe this will enable readers who are acquainted with such people, projects, or PACE Centers to arrive at incrementally greater appreciation of the dynamics affecting efforts to substantially improve California's educational system.

Early in the course of this study it became obvious that the EDP Centers and the PACE Centers were two completely different organisms. What started out as a joint study of two types of regional centers became two separate studies. The printing of the results of these studies as two separate reports reflects that functional disparateness.

We would like to acknowledge the truly excellent cooperation and assistance tendered us in the course of this study. The staff in the PACE Centers were most cooperative, even after filling out frequently massive questionnaires. Board members, county office staff, school district representatives, and community leaders gave freely of their time in interviews. Some of our interviewees even interrupted their vacations to talk to us. The depth of this study effort could never have been achieved without the interest and willingness to help we have come to appreciate so greatly in California educators and their associates.

The study team particularly appreciates the help received from members of the statewide Study Advisory Committee who met with us on three different occasions, once for a day and a half. The "feedback" from that group was most candid, constructive, and appreciated. Finally, we'd like to acknowledge the fine support received from our immediate client, the administrators of the San Jose Unified School District: Dr. George M. Downing, Superintendent; Mr. John Davis, Administrative Assistant; and Mr. Peter A. Hartman, hired by the district as the Project Coordinator for this study. Their efforts have contributed significantly to the efficiency with which this project was managed and to the value which may be derived from it.

Members of the Arthur D. Little, Inc., study team(s) were:

Mr. William K. Benton, Cambridge
Mr. Edmond P. Dienstag, San Francisco
Dr. Michael J. Wilson, New England Education Data Systems, Cambridge, Consultant
Dr. Harry B. Wolfe, San Francisco
Dr. Robert L. Barringer, San Francisco, Leader of the EDP Center Study Team

Dr. Conrad Briner, Claremont Graduate School, Consultant
Mr. Richard Hibschman, Cambridge
Mr. Larry Kilham, Cambridge
Dr. Anton Morton, Cambridge
Dr. James R. Powers, Los Angeles
Dr. Raymond J. Young, Cambridge
Dr. Charles C. Halbower, Cambridge, Project Director and Leader of the PACE Center Study Team

I. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

This comprehensive study was designed and carried out to respond to important concerns of several parties-in-interest regarding the impact of Title III of the Elementary and Secondary Education Act (ESEA) of 1965, particularly the actual and potential contributions of the regional supplementary educational (PACE) Centers and the regional educational data processing (EDP) centers in California funded by Title III. This report deals with the study of the PACE Centers. The study report on EDP Centers is packaged separately. This chapter is organized to address sequentially those issues and their implications regarding Title III and the PACE Centers particularly relevant to concerns at the national, state, and local (regional) levels.

The general purpose, objectives, and national priorities for ESEA Title III are stated below as they have been taken and slightly paraphrased from the PACE Manual of May, 1967.

> PURPOSE: ...the innovative and exemplary programs supported by PACE (Projects to Advance Creativity in Education) are intended to contribute substantially to educational improvement...
>
> OBJECTIVES:
>
> 1. to encourage school districts to develop imaginative, innovative solutions to educational problems, and to more effectively utilize research findings
> 2. to create, design, and make intelligent use of supplementary centers and services
> 3. to translate the latest knowledge about teaching and learning into widespread educational practice
> 4. to create an awareness of new programs and services of high quality
> 5. to demonstrate worthwhile innovations in educational practices through exemplary programs
> 6. to supplement existing programs and facilities
> 7. to encourage local school agencies to adapt an exemplary program to local requirements and organize its incorporation into the educational program.

"The heart of the PACE program is in these provisions for bringing a creative force to the improvement of schools and for demonstrating that better practices can be applied."

EMPHASES: "Because PACE is specifically concerned with creative approaches to improve the nation's schools, it must have sufficient flexibility both to promote a consistent program of innovations and to attack critical problems as they occur... priorities in the use of funds must necessarily shift from time to time." PACE encourages certain types of projects in line with the following priorities.

1. First priority is given to projects which deal with problems in the national interest. Currently, the national interest is focused on (1) improving educational opportunities, (2) planning for metropolitan areas, (3) meeting needs of rural communities, and (4) coordinating all community resources--social, cultural, governmental, and industrial--in the establishment and achievement of goals in and through education.
2. Second priority will be given to projects which contribute to the invention and demonstration stages of the innovation (educational development and change) process.

Consideration is given to projects which have one or more of these concerns and which also are directed toward meeting educational needs in fields that have received insufficient attention in the past.

A. CONCLUSIONS AND RECOMMENDATIONS WITH NATIONAL IMPLICATIONS

1. Much in line with the hopes and expectations of Congressional legislators and U. S. Office of Education officials, ESEA Title III has had a significant, positive impact on educational development, at least in California. This study confirms many of the conclusions of the nationwide study of Title III conducted by Miller's study team.[1] (Section B of Chapter II summarizes a number of Miller's findings with which we concur and indicates a few exceptions to the conclusions of that study.) However, the full potential of Title III has not yet been realized. A few politically or administratively expedient compromises appear to have taken their toll in attenuating the title's primary thrust toward significant educational reform as envisioned by President Johnson's Task Force on Education chaired by John Gardner. (Section A of Chapter II and Appendix B treat the issues and dynamics underlying such compromises.)

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[1] Miller, Richard I., Catalyst for Change, A National Study of ESEA Title III (PACE): USOE Contract No. OEC 2-7-000074-0074, January 31, 1967.

Maximum benefit from the Title III program will be achieved through policies and practices which re-emphasize the focus on the development, demonstration, and diffusion of truly exemplary, i.e., demonstrably superior, solutions to critical educational problems. The intent of Title III projects should be to achieve significant, even quantum, changes in the quality of education and widespread adaptation and adoption of concepts and programs successful in producing such change. (See Section B of Chapter II for a discussion of the educational change process.) Title III guidelines should attempt to redress observed tendencies toward (a) the fragmentation of effort and the dilution of impact which results from the allocation of Title III funds as a virtual categorical aid to subject areas, specialized services, particular population segments, or areas of critical need. The guidelines should stress the use of Title III projects and funds to support broadly conceived program developments which integrate traditionally separate areas of specialization in convergent, mutually supportive efforts toward educational reform.

Responses by project applicants keying primarily on the "innovative" aspects of Title III also have tended to be dysfunctional. Rarely are school districts able to mobilize the resources necessary to invent de novo those educational developments which are most apt to result in substantial educational improvement, and they should not be expected to do so. The cost and inefficiency of such efforts when compared to derived benefits are typically no bargain. Moreover, the most critical need is not for more inventions; it is for the broader diffusion of educational developments already tested and known to work. The characteristic time lag of educational innovation diffusion is an indictment of our education system. Projects to support innovation in school districts should be limited largely to the innovative packaging and adaptation of elements of concepts, programs and services developed and tested elsewhere. Title III guidelines should be revised accordingly.

The invention, design, development, and initial testing functions should be allocated to agencies and institutions more suitably equipped to carry them out, e.g., educational research and development centers and regional educational laboratories. PACE Centers can perform a unique and needed linking function between such specialized agencies and school districts. (Chapters II and III contain discussions of the differentiated and supplementary role of PACE Centers in carrying out such a linking function. Chapter IV deals with the evaluation of the ways in which PACE Centers fulfill this role.)

In order to capitalize most effectively on the unique potential of Title III, there is a need to de-emphasize those aspects of Title III which provide for the "extension" of services in the direction of improved quality or quantity. The impact of limited Title III funds should not be attenuated by their use to extend or supplement services even where such extensions might be both innovative and needed. There is absolutely no question but that supplementary or extended programs and services are needed in many parts of the country and that often the need is great. However, the very magnitude of such need defies the capacity of limited Title III funds to even begin to satisfy existing requirements. If project funds are granted on the basis of need, vastly greater sums of money will be needed. Further, such extensions or supplements are usually rather specialized in nature, they tend to be more or less "tune ups" and "tack ons," and all too often they have only minimal impact on the overall quality of education.

2. The regional concept of supplementary educational (PACE) centers, as exemplified by California's 21 PACE Centers, is valid and useful. We endorse this concept and recommend it for application in other states. California's PACE Centers are based on principles of interdependence among educational agencies and differentiation of role among institutions and agencies participating in the educational development and change process. They facilitate joint planning and effective use of pooled resources among districts and intermediate units. They operate to ameliorate proclivities toward isolationism and parochialism. They stimulate interaction and communication among a variety of parties-in-interest regarding educational development and change. They provide a vehicle for stimulating more extensive community involvement in assessing important learner needs and in developing dialogues among elements of our pluralistic society in support of quality education. In a truly supplementary way, they fulfill the need for planning agencies even in a state blessed with a strong public education system. They should be continued in operation in a somewhat modified organizational system.

3. Title III, as the program to support substantial educational development and change and to fund exemplary programs of quality education for the purpose of demonstration and diffusion, should be administered by the U. S. Office of Education through 100 percent grants. Just as Miller[2] recommended in his study, this administration should be carried out in partnership with the states as provided in the original legislation for ESEA Title III.

In recognition of the need for a program to support the extension or supplementation of educational programs and services in either quality or quantity, a new program should be established. This new program, possibly under a new title, should be designed to support projects which qualify on the basis of assessed and demonstrated critical need. Such a program should be administered by the states, as the 1967 amendments to Title III provided. We recommend that Federal funding of projects under this program be associated with some form of "matching" with state funds, somewhat on the order of the highly successful National Defense Education Act (NDEA) program. As was considered early in discussions leading to the enactment of ESEA, the ratio of Federal funds to state funds in support of this program might differ among states based on criteria related to the "effort" each state makes in supporting education as compared to its wealth.

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[2] Ibid.

This differentiation between a program oriented toward the support of significant educational reform vs. one oriented to help meet critical needs would serve to reduce the confusion about the purpose of Title III now apparent among educators and legislators. The administration of Title III by the states invites the dispersion of Title III funds among a variety of categorical applications to meet narrowly defined needs, and results in dilution of the potential impact of the program through politically popular provisions of "a little something for everyone."

4. Title III provisions should be changed so as to provide for continued Federal funding of supplementary educational (PACE) centers subject to periodic evaluations. We submit that the importance of regional PACE Centers in furthering the national interest in educational reform and in supporting significant steps toward the systematic development of quality education justifies this change. Federal funding of other Title III projects demonstrating exemplary educational developments and stimulating their diffusion should continue to be limited to a maximum period of three years. This conclusion is based on the rationale that if the demonstrated programs and services are truly exemplary, as shown through appropriate evaluations and as recognized and appreciated through an improved dissemination process, the states or districts will support their diffusion and adoption in other locations where they are needed. The critical test of the value of a demonstrated new educational development is whether the district hosting the demonstration continues to support it after termination of Federal funding.

5. There is a need for the development and articulation of a national strategy for coordinating Titles III and IV in order to further capitalize upon the potential inherent in these two programs. This strategy to facilitate the process of educational development and change throughout the nation should be implemented by (a) policy and procedural guidelines developed in the U. S. Office of Education for coordinating the activities and the use of the nationwide network of regional educational laboratories, educational research and development centers, and supplementary educational (PACE) centers; and (b) the establishment of a "data bank" which capitalizes upon but which goes well beyond the current ERIC (Educational Research Information Centers) system. This data bank should contain more information of an evaluative nature (than does ERIC) so as to provide needed assistance in decision making at state and regional levels. Educational planners require improved access to information generated all over the country as to what kind of educational developments work best under what conditions. Educational planners in California need access to information which may have been developed in Illinois, New York, or other states in order to avoid the unnecessary expense of "re-inventing the wheel." Further, there is a critical need for information which indicates what didn't work and why. Access to such information could prevent false steps and failures costly in time, money, and commitment. The national interest in the efficient use of planning time and resources and in the effective exploitation of the results of

nationwide investments in educational development would seem to justify the implementation of this recommendation.

6. Congressional action should be taken to redress the mismatch of Federal funding periods with the school year. Approved projects should be funded no later than the first of June so that material and supplies can be purchased, facilities can be secured, and staff hired during the summer months, if the project is to be operative at the beginning of the school year. This means that appropriations should be made by the first of January in order to accommodate the administrative processes of project application, review, and approval. Current schedules of appropriation and funding precipitate serious problems at state, regional and local levels in planning, budgeting, and hiring. These problems seriously constrain the effectiveness of the Title III program in its implementation.

If it is indeed impossible to adjust the timing of project funding approval, some of the problems could be ameliorated by funding multiyear projects for two year periods subject to annual evaluations which justify yearly extensions.

B. CONCLUSIONS AND RECOMMENDATIONS WITH IMPLICATIONS FOR THE STATE

1. Because of the unique mission and the important contributions of the regional PACE Centers in California, a modified network of these PACE Centers should be continued in operation as an integral part of the State's educational system. Under the governance of the State Board of Education, the educational system of the State must carry out the following seven broadly defined major functions:

(1) Sensing emerging needs for educational development in the State, and for related changes in the State's educational system.

(2) Assigning priorities and allocating resources among areas of discovered need in the context of comprehensive and integrated State plans for education.

(3) Providing for the design of improved instructional programs and services, and for the stimulation and support of new educational developments to meet the discovered needs.

(4) Evaluating both new and established educational programs and services, the ways in which such programs and services are planned and administered, and requirements for redirecting allocations of human and material resources.

(5) Facilitating the dissemination of information regarding new instructional programs and services and their effects.

(6) Encouraging and supporting the adoption of new educational developments and improved instructional programs and services.

(7) Assuring the quality of educational offerings in accordance with legislative mandates and as required by regulations of the State Board.

The PACE Centers make major contributions in directly carrying out responsibilities associated with functional requirements numbered 1, 3, 5, and 6. They assist importantly in carrying out functional requirements numbered 2 and 4. They should not be involved in the policing functions of number 7. In supplementing the missions and functions of the Department of Education, the intermediate units, and the local districts, and in fulfilling otherwise unmet needs of policy-making boards of education responsible for the quality of education in the State, the unique MISSION of the PACE Centers should be TO STIMULATE, AND ASSIST IN PLANNING FOR AND IN THE DIFFUSION OF, SIGNIFICANT CHANGE IN EDUCATIONAL PRACTICE WHICH IS RESPONSIVE TO IMPORTANT STUDENT NEEDS.

A detailed set of client-oriented functions and organizational maintenance functions recommended for the PACE Centers is presented in Appendix C. The key elements of those functional requirements are listed below.

Client-Oriented Functions

(1) Inform constituents of the purpose of ESEA Title III, the mission of the Center, and the range of services available from Center staff and *ad hoc* consultants

(2) Provide for the assessment of educational needs in the area served

(3) Thoroughly investigate what has been done elsewhere in coping with those kinds of needs (type or area of need, intensity, characteristics of learners, and etiology of needs) assigned high priority by the community

(4) Determine the capabilities and resources needed to effect the adaptation and adoption of possible "solutions" to high priority needs, involving resource persons and community representatives where appropriate and possible

(5) Assist community representatives in assessing and inventorying the nature and extent of capabilities and resources in and available to the community in its efforts to modify and/or adopt possible solutions to meet high priority needs

(6) Organize discussions among educators, community leaders and other resource persons to review developed information and plan ways of utilizing available resources in meeting the high priority needs of learners in the most effective manner

(7) Provide for supplying continuing support and necessary technical knowledge to agencies striving to develop innovative and/or exemplary educational programs and projects to test and demonstrate the effectiveness of likely solutions to priority problems

(8) Assist districts which are not importantly involved in ongoing demonstration projects, but which have priority learner needs similar to those treated by a given project, in investigating the feasibility of adopting demonstrated solutions to those needs

Organizational Maintenance Functions of the Centers

(1) Identify and fulfill needed change agent roles in the area served by the Center and in ways appreciated by the community and consistent with the spirit of ESEA Title III

(2) Periodically evaluate the appropriateness of the Center's defined role, its strategy, the effectiveness and costs of its current functions, the array of services offered (vs. those utilized), the allocation of time and effort, and the appropriateness of the staffing pattern of the Center

(3) Modify the Center's role, strategy, functions, budget, services offered, staffing pattern, and allocation of time and effort in light of evaluative information regarding current needs in the service area, the existence and capabilities of other resource agencies, and new State and Federal priorities and guidelines

(4) Exchange information among Centers and with other appropriate agencies regarding newly developed techniques, results of literature searches, useful resource persons and agencies, results of project planning efforts, project proposals (including those rejected, together with reasons why), the progress and results of operational projects, the existence and availability of unique or highly developed skills among Center staff, new approaches to project evaluation, information dissemination, and the stimulation of diffusion of demonstrated solutions to other districts, etc., to the end that the fruits of the efforts of all Centers can be made more widely available

(5) Cooperate with other agencies and institutions in planning ways in which the roles of each can be differentiated and functional linkages established among them so as to facilitate efficient operation of a true "system" of educational development

In order for the PACE Centers to most effectively fulfill their mission, serve the important functional requirements of the State's educational system indicated earlier, and carry out the functions listed above, we recommend the following changes:

a. The PACE Centers should be regrouped and reduced in number in order to emphasize and capitalize upon their regional character, facilitate more multidistrict planning and interagency cooperation, and increase their organizational effectiveness.

b. The management structure of the PACE Centers should be reorganized and redefined in order to increase the pluralistic representation on their boards of directors, reduce the degree to which some PACE Centers have been coopted or controlled by administrators of the educational establishment, and facilitate the Centers' capacity to influence significant educational development by working "from the outside in."

c. The reorganized network of PACE Centers should continue to be funded at an annual level of approximately $2.0 to 2.5 million. If Federal funding for these Centers is terminated, then State funding should be provided.

Background information and specific conclusions in support of these recommendations are detailed in Sections D through H of Chapter IV.

2. Our recommendations for the reorganization of PACE Centers are based on our evaluations of the factors which both enhanced and detracted from the effectiveness of the Centers in fulfilling their mission and carrying out their functions. After considering such factors and taking into account possible ways of grouping PACE Center service areas in order to most economically serve the constituents, we recommend, as a "first cut" at reorganizing PACE Center groupings, a network of 17 Centers. With the exception of Los Angeles City, Los Angeles County, and the Metropolitan Bay Area districts (San Francisco, Richmond, Berkeley, and Oakland), the other 14 PACE Centers are multicounty groupings. This configuration is shown in Section F of Chapter IV.

Our analysis indicated that student enrollment (100,000 to 300,000) as a criterion for determining PACE Center service area boundaries was not as important as criteria of geographic size, number and size of individual school districts in the service area, and differences in the demographic characteristics of school districts in the service area. Our recommended configuration takes these factors into account, although more analysis still remains to be done in accommodating demographic differences among districts in southern California. We offer this recommended configuration as an initial step for the new State Educational Innovation Advisory Commission to consider in drafting revised policies and guidelines for PACE Center operations.

With regard to the reorganization or re-establishment of PACE Centers, we recommend that the role of the applicant agent be limited to two functions: (1) preparing and submitting the project proposal for a PACE Center, and (2) establishing an advisory committee to recruit the initial members of the Executive Board. Thereafter, the responsibility for setting Center policy and overseeing the ongoing operation of the Center should be vested in the Center's Executive Board. It would be desirable also to turn over the fiscal responsibilities for PACE Center operations to the Executive Board through some kind of a contractual arrangement. However, any such arrangement would have to meet with the approval of the U. S. Commissioner of Education.

We recognize that the applicant agents in California presently carry out these two functions. However, at the same time, we recognize that, in a number of instances, the applicant agent's role, function, and influence have far exceeded what we recommend. By exerting strict budgetary control over the Center, by insisting that PACE Centers conform to their mode of operation, by loading Executive Boards with administrators, by lack of support, or by autocratic control, several applicant agencies have exerted a very considerable amount of influence over a number of PACE Centers' policies and operations. Because of this, some PACE Centers obviously have been constrained in carrying out the charter of Title III legislation and guidelines. By exerting so much influence over their respective Centers, some applicant agents have made it difficult for change to be stimulated "from the outside in." In brief, eight or so of the PACE Centers have been coopted by the educational establishment to a greater or lesser degree.

Those eight PACE Centers should be freer than they presently are to chart their own course. PACE Center staff should be accountable only to the Center's board, and not to the top administrator(s) of the applicant agency. A PACE Executive Board should be comprised of representatives of our pluralistic society, accountable and free to relate to many "publics," including members of intermediate unit and district boards who are responsible for the quality of education in their institutions. The applicant agent's influence on PACE should be no greater than that of any other "public" and should be manifested in the same way--through a representative on the Center's Executive Board.

To provide for an Executive Board widely representative of many "publics," we recommend a large self-perpetuating board, 12 to 17 members, and that representatives from at least four different resource groups in the community be appointed to each Executive Board: (a) cultural groups, (b) community organizations and minority groups, (c) educators--administrators, teachers, PTA members, and representatives of higher education, and (d) "consumer" groups, such as the professions, business, industry, labor, or other commercial interests. However, regardless of pluralistic considerations, the board must be comprised of individuals truly interested in quality education.

It is sad but true that PACE Centers in California as yet have had little impact on teachers, and vice versa. In fact, it probably is safe to say that the majority of California teachers have no knowledge as to the purpose of Title III and the mission and functions of PACE Centers. One way to insure more involvement of teachers in PACE is to provide them more representation on the Executive Board. Teachers appointed to the board might serve as representatives of a school, a school district, or a professional teachers organization (this would provide an opportunity for one person to speak for and report back to a large number of teachers). Recognizing the growing interest of teachers in influencing the course of education in this country, and recognizing that the teacher is a most vital component of any plan to change and improve educational programs in the classroom, we firmly believe that teachers should have representation on boards equal to that of administrators.

We recommend that the role of PACE Executive Boards be that of setting policy. We recognize that the role of most boards is to make policy. However, we raise the issue and make the recommendation because several PACE Center boards have spent much of their time wrestling with administrative issues. Too often, these forays into administration come at the expense of important policy matters.

We recommend that PACE Centers make extensive use of ad hoc advisory committees to carry out specific tasks of importance to the Center. Not many PACE Centers in California have had continuing success with advisory committees. Conceived by many Centers as regional advisory groups to the boards, a number of advisory committees have died a natural death due to lack of interest on the part of committee members and lack of direction from PACE boards and staff. Some became disenchanted because they had no decision-making powers. Most felt they had no significant influence, and a few resented being "window dressing."

However, we believe, if given the proper direction and leadership, advisory committees can be quite valuable. They can focus on one problem area and study it in depth--something for which a board does not have time. They could provide expertise or special resources in a given area, e.g., music, art, reading, school organization, educational technology, and so on. So that it can function adequately in its role, an advisory committee needs to be given a clear and explicit charge. The task given should be important and meaningful in order to insure the interest and involvement of the committee members. When the task is complete, the advisory committee should be dissolved.

We recommend that the State Educational Innovation Advisory Commission adopt guidelines to provide for three different types of applicant agents:

(1) In those rare situations where the service area of the PACE Center would most logically be a one-city or one-county area, the applicant agency should be the city board of education or the county board of education,

respectively. (Although we understand that some legal opinion holds that county superintendents are the legal applicant agency, we still maintain that, as the policy group responsible for educational quality, the board should have this role.)

(2) In cases other than those above, and when it is possible to do so, the applicant agency should be established through a joint powers agreement.

(3) In those cases where joint powers agreements are not achieved, the State Commission might request a county board of education or a district board of education to act as the applicant agency, and may utilize an ad hoc survey team, as well as the State administrative unit, to develop the necessary data and proposal.

The very large city, Los Angeles, is a special case and in many ways acts as an intermediate unit and state unit of education. It frequently relates directly to Sacramento and to Washington for certain purposes rather than through the Office of the County Superintendent or the State Department of Education. Also, the diversity and scope of its problems and resources suggests regional status and sufficiency that is at least equivalent to and probably greater than many PACE Center service areas comprised of multiple school districts and intermediate units.

Regarding Los Angeles City, the Center's Executive Board and its director must be influential in the resource allocation process of the system. The Executive Board should be independent and the director should serve that board and be administratively attached to the district organization directly under the deputy superintendent.

Similar considerations of relationships should hold for PACE Centers serving one county. The Center must be permitted to achieve a high degree of organizational independence and functional integrity by operating under a policy-making Executive Board established by an advisory committee to the applicant agency. It is apparent, however, that Centers of this sort will at least initially require the political and possibly the operational support of the county board and the superintendent. However, the Centers must be established so as to be able to provide services in response to needs of its clientele and not as agents of the county boards or superintendents.

Utilization of joint powers agreements for designating applicant agents which in turn submit project proposals to establish PACE Centers serving multiple counties and school districts implies that each participating agency in the joint powers agreement will give up some degree of autonomy in order to facilitate the effective operation of the PACE Centers. Probably certain boards of education, county and/or district superintendents and other educational leaders will need to take the initiative in creating such joint powers agreements. However, it is recommended that the State Educational Innovation Advisory Commission, possibly with a task force or study group comprised of members of CASA and CSBA, and with assistance from appropriate legal advisors, attempt to draw up a model joint powers agreement on which to base others in the State.

Some county and district superintendents will be understandably disappointed with this recommendation. They will want "their own" Centers. However, our conclusions strongly suggest that in order for Centers to be viable in their relationships to clients and in carrying out their mission, they must have adequate prerogatives to function as change agents and in accordance with client needs rather than those of the applicant agent.

It is quite possible that in some locations joint powers agreements will not be reached. In these cases we suggest that the State Commission might act to designate the applicant agent most appropriate for taking the initial steps of establishing a regional PACE Center. The understanding in these cases would be that a joint powers agreement is still desired and that efforts will continue to achieve such agreement. The powers and functions of the initial applicant agent, unless they had been completely discharged, would be transferred accordingly.

We further recommend that if the Commissioner of Education cannot approve arrangements which limit the responsibilities of the applicant agent to just the two mentioned earlier, the fiscal responsibilities of the applicant agent (the only ones remaining after the Center becomes operational) should be rotated by agreement or contract among legally appropriate agencies participating in the PACE Center. This process could be effected with or without a joint powers agreement and would reduce the possibility of the Center being adversely constrained by an habitually controlling applicant agent.

All this organizational and legal negotiation represents a very considerable amount of effort and potential frustration. But, if all the PACE Centers enjoyed the flexibility to act as responsively to client needs as approximately two-thirds of the Centers do, these recommendations would not be necessary. Even so, they are by no means entirely satisfactory since joint powers agreements may be stymied either legally or by the lack of enough "joint" participants. Thus, some areas may not be adequately served.

The most effective solution, one we have recommended before and now do again to the Legislature, is to consolidate and strengthen the intermediate units. Section B of Chapter III contains a short discussion of the role of the intermediate unit in California's system of public education and its current difficulties in coordinating instructional development. Appendix D presents the conclusions and recommendations of the "Committee of Ten" regarding the future role of the intermediate unit. Drawing upon that material and our own experience, we offer the following recommendations. Establish no more than 25 intermediate units; provide for elected boards and appointed superintendents;

amend those statutes and regulations which constrain them from functioning as area-wide policy making and administrative units; and attach a PACE Center, together with its Executive Board, to each strengthened and reorganized intermediate unit to serve as the arm of the unit responsible for planning and development in support of systematic change toward quality education. Perhaps the Legislature also would consider applying a proportion of the County School Service Fund to the support of these transplanted agencies chartered to work for educational improvement.

3. If, in spite of the results of this study and our recommendations, Federal funding of PACE Centers is terminated, we urge funding by the State. The Legislature, of course, will want to receive recommendations from the newly chartered (by AB 1865) State Educational Innovation Advisory Commission regarding the number of Centers to be continued and the level of support to be provided. We trust that the State Board, with its interest in supporting educational development and quality education, also will make its views known to the Legislature. An appropriation by the Legislature for this purpose would, of course, be the simplest mode of financing the PACE Centers. Perhaps more likely is that the Legislature would be willing to allocate a given number of dollars from the school fund (either the General School Fund or the County School Service Fund) to support the Centers. Allocations from the County School Service Fund might have the additional advantage of encouraging closer working relationships between staff of the intermediate units and staff of the PACE Centers.

One possible alternative to the maintenance and support of PACE Centers as quasi-independent institutions is to assign them to a third or so of the existing Offices of County Superintendents of Schools. Judging from the results of our study, this would be a serious error. In at least half such instances, the PACE Centers would tend to become regular operating units of the County Offices occupied more with day-to-day concerns and pressing short term operating problems than with the mission of stimulating truly significant change toward quality education.

4. We determined that a need existed not only nationally but also within the State for a "switching center" for the collection, analysis, interpretation, and dissemination of information important to educational development in the State. This information switching center should be able to capitalize upon baseline data generated by the (recommended) California Educational Information System (CEIS) and should be tied in with the sophisticated resources of the recommended Bureau of Educational Reference in the Department of Education. It also could be linked with the (hopefully upgraded and extended) national information system (ERIC) and operate in liaison with regional educational laboratories and educational research and development centers in the State. Through the national information system it should achieve linkages with regional laboratories and research and development centers in other states, and benefit from the results of periodic, systematic, nationwide educational assessments.

Since Title III now provides 7 1/2 percent of the State's allocation of Title III monies for state-level administration of the title, we recommend that approximately half--perhaps 4 percent--of these funds be allocated for staff salaries, other support expenses and travel, and the other half--perhaps 3 1/2 percent--be allocated for the important kinds of dissemination processes mentioned above. Such a strengthened state-level information dissemination process would be in line with the provisions of AB 1865. We suggest that these dissemination funds be used not only for information collection, analysis, and dissemination, but also for the support of visitations and travel of school district personnel to demonstrations and workshops held in other parts of the State, for conferences and seminar expenses, and, particularly, for the establishment of three- to four-week workshops at the site of a particularly successful demonstration in order that participants can receive more than a "show and tell" benefit. Such workshops would permit participants to actually get involved in the educational processes being demonstrated and to obtain "hands on" experience. They could see for themselves what worked and what did not and, if the demonstration was truly successful, the enthusiasm of the local district people probably would be contagious. Such dissemination processes are more expensive than the standard, routine ones, but they hold much greater promise of stimulating meaningful diffusion, particularly in generating commitment to adopt demonstrated solutions to important educational problems.

5. Concerning the facilitation of interagency cooperation in stimulating educational development and change, we endorse the State Committee on Public Education's recommendation to establish laboratory and demonstration schools, in possible conjunction with regional educational laboratories, for the purpose of trying out dramatically new educational programs and processes. We applaud the State Board for acting on this recommendation and for waiving substantive requirements of the Education Code which might constrain the use of as yet unsanctioned courses of study, textbooks, teaching staff, and other mandated requirements.

We recommend that the State Board take similar action with respect to approved Title III projects in the State. We suggest that State Board approval of a Title III project automatically confer upon the district hosting the project the status of a laboratory or experimental school for those students and schools actually participating in the project. This action probably would significantly enhance the innovativeness of projects designed and applied for. It possibly would provide considerable feedback valuable to districts interested in exploiting the possibilities of the new Senate Bill 1, the recent "Magna Carta" of education in California.

6. One deficiency of some significance discovered in our study was the need for more and better evaluation tools and processes. This is a generic problem of education, in California as well as in the rest of

the nation. It was mentioned in the annual report of Title I carried out by the Office of Compensatory Education in California, by the annual report of the U. S. Office of Education on Title I, by the 1967 nationwide study of Title III by Richard Miller, and by California's Legislative Analyst, as well as by other educational observers.

The state-level administrative unit for Title III should contain professional staff with top level skills in research design and evaluation. However, this requirement is not specific to Title III administration. It is generally needed for the several programs and activities of the Department. There is a definite requirement for direction, coordination and integration of evaluation processes and results on a Department-wide basis. These upgraded and centrally coordinated evaluation capabilities should be directed toward the design of improved needs assessment tools, processes, and systems, so that periodic readings can be taken of educational needs in the State to serve as baselines from which to measure the effects of program treatment applied to satisfy those needs. Results of such periodic surveys should constitute one important input toward the recommended annual report of the State Board and the Department regarding their stewardship of public education. These evaluation data also would help to satisfy the reporting requirements of the Legislature and the U. S. Commissioner of Education. Upgraded evaluation processes applied to the results of district projects and to the management of those projects, as well as to the effects and management of PACE Centers will provide important data and guidance for decision making. Such data is notably lacking at the present time.

It is obvious by now that the standard, stereotyped methods of evaluation are only marginally appropriate for many of the desired uses. Creative new methods must be developed. Perhaps evaluation activities might also be used to facilitate the diffusion stages of the process of educational development and change. For example, we recommend that the state-level Title III administrative unit organize a series of evaluation teams to visit periodically PACE Centers and districts or intermediate units hosting Title III projects to evaluate their activities and results. Such teams should be multidisciplinary and pluralistic in their make-up and, hopefully, would include members of the staff of other PACE Centers, professional staff from the regional educational laboratories, staff members from intermediate units, and importantly, teachers and administrators from districts likely to be interested in the new development being demonstrated. This experience as a member of an evaluation team might have an impact on such district staff well beyond that afforded by a regular "show and tell" visit to a demonstration project. Consequently, interest in and potential commitment to adopt the demonstrated and evaluated educational development in the district "back home' may be a dividend from this evaluation process.

C. CONCLUSIONS AND RECOMMENDATIONS WITH IMPLICATIONS FOR LOCAL (REGIONAL) LEVELS

Much of the material in the two preceding sections is directly relevant to the interests and concerns of PACE Centers, intermediate units, and local school districts. Summary statements of a few other conclusions and recommendations may be pertinent here. Chapter IV, especially Sections C through G, and Appendices A, C, and E contain a more comprehensive and detailed discussion of the conclusions and recommendations regarding the PACE Centers.

1. We recommend that the staff of PACE Centers be exposed to training programs and workshops carried out by Operation PEP (Preparing Educational Planners) or by graduates of that program. Such training generally has been viewed as valuable by our contacts and interviewees.

2. In the preceding section we made some observations about the needs assessment processes and recommended ways of improving general evaluation processes. Perhaps it would be helpful to note some conclusions backing up those recommendations.

Of the several major PACE Center functions, that of needs assessment and analysis is the least well executed. Intensity of need, except in some relative terms, was not generally measured. However, the process of focusing PACE Center activity upon identified areas of need was generally satisfactory. The community discussions concerning educational needs and what to do about them generated considerable community support for educational development.

Among the PACE Center activities, one of the best performed was that of helping clients determine what might be done about identified needs. Staff resources were mobilized extensively to assist clients in this kind of planning. Early project proposals suffered from a lack of operationally defined or measurable objectives which were directly related to specified educational needs; but the situation is improving.

In general, there was wide regional participation in the discussions regarding needs assessment and priority setting among needs. However, in terms of assigning priorities to identified needs, the actual decision making was much more closely controlled, particularly by boards of directors and county superintendents.

3. Although most all the Centers had outlined an appropriate process for determining priority issues on which considerable Center effort would be focused, the actual efficacy of this process was not nearly so widely evident. As indicated earlier, we recommend the more effective use of ad hoc advisory committees.

Among the various community groups and organizations, the segment most thoroughly involved in the decision making of the Centers was that of the school community. Even so, in at least six or eight Centers, district superintendents were not admitted to full partnership with county superintendents in this decision-making process. Administrators were involved to a much greater degree in decision-making and planning than were teachers.

The Centers most effective in carrying out their mission and functions in assisting client districts were those which had been successful in their efforts to significantly involve elements of the community in the management processes of the Center as well as in its client oriented activities.

4. On the average, about 40 percent of the project proposals designed and submitted with at least some PACE Center assistance are approved and funded. However, those benefiting from significant degrees of PACE Center assistance are approved approximately 50 percent of the time while those prepared with a good deal less assistance from the Centers are approved about 30 percent of the time.

5. Although the initial focus of PACE Center activity was on needs assessment and proposal writing, this focus has shifted significantly in the last year or so. More effort is now devoted to assisting clients in long-range planning, in identifying kinds of solutions to educational problems which might be supported by programs other than Title III, and by developing contingency plans for projects submitted for funding in order to assure implementation of some aspects of the project even if it does not become funded. In particular, the Centers have increased the number of seminars, workshops, conferences, and other inservice training experiences arranged for teachers and middle level professional staff in client school districts. These new activities generally have been well received.

6. While we did not evaluate the effects of projects designed with the help of PACE Centers, we observed in passing that a number of such projects were producing some evidence of increased student achievement, but there was even more evidence of student and teacher enthusiasm, parental involvement in and support of schools, and teacher involvement in inservice training. One or two projects serve as exemplary models for establishing participatory community responsibility for educational quality.

7. The number of school districts involved in PACE Center activities of various kinds is much more impressive than the number and variety of community resource groups involved. Fifty-nine percent of districts within the State participated in needs assessments; 22 percent participated in the formulation of goals and priorities; and 33 percent were represented on various PACE Center advisory or steering committees.

Cultural agencies or groups are represented on the boards of only three PACE Centers and on the advisory committees of only 11 Centers. Business and industry has been involved in several projects mostly related to vocational education or work study, but only about 25 percent of the PACE Centers are making good use of the potential represented by this important sector of our society. However, institutions of higher education are much more adequately represented and involved in the activities of the PACE Centers. Community organizations are more widely represented and involved than are all other categories of nonschool community resources with the exception of colleges and universities. Minimal involvement has taken place with the two regional educational laboratories in California. Parochial school representatives appear to be moderately well represented in PACE Center activities and management functions.

8. In spite of the extent of involvement of school districts in PACE Center affairs we were surprised to find a substantial number of district administrators who did not understand the purpose of Title III, nor did they appreciate the services available from PACE Centers. It was obvious that those administrators who were unaware of Title III and of the functions of the PACE Centers were most apt to be critical of the Centers and of the amount of funds applied to their support.

9. In spite of the generally impressive activities of the PACE Centers and the nature and caliber of projects which have been approved and implemented, there is one process central to the prime thrust of Title III that is not yet well advanced: the process of diffusing educational developments installed and demonstrated in a "host" district into other districts which also should be able to use the demonstrated "solution." As yet, the seminal or leverage effect of demonstration projects on other school districts generally has been slight. New approaches to facilitate adaptation and adoption must be designed and implemented.

10. The staffing pattern of the 21 PACE Centers in California in general appears to be quite appropriate for their roles and specified objectives. We were generally impressed by the staff quality in most Centers. However, the salary schedules of approximately half the Centers, most of which were based on the salary structure of the county offices, are low enough to present obstacles to hiring qualified directors and staff.

11. It rapidly became apparent in this study that there was virtually zero overlap between the roles and objectives of the regional data processing (EDP) centers and the regional PACE Centers. A goal of one agency is to achieve a highly standardized, efficient operation with resulting low unit costs and a sufficiently large market penetration to generate enough revenue to cover operational costs. The role of the

other agency is to stimulate and facilitate educational development and change. Standardization of product line is anathema. The PACE Centers are totally dependent on outside funds since they generate no revenues.

The services provided by EDP Centers focus on the aggregation, analysis, and transmission of data, and are based on computer technology and the efficient use of hardware and software. The services provided by PACE Centers focus on planning and are based on highly social and personalized interactions. The costs of EDP Center operations are capital intensive while the costs of PACE Center operations are labor intensive.

We conclude that there is no reason to merge the two different kinds of regional centers. However, if and when there is a consolidation and strengthening of the intermediate units, then such a unit probably would be an appropriate home for both regional agencies.

II. ESEA TITLE III AND THE EDUCATIONAL CHANGE PROCESS

This chapter is the first of two which describe the context in which California's 21 Regional Supplementary Educational (PACE) Centers operate. As such, it helps define the rationales upon which PACE Centers were established and the roles they are expected to fulfill. This understanding is basic to an appropriate, thorough-going, careful evaluation of the PACE Centers.

The first section of this chapter describes the principal thrusts of Title III of the Elementary and Secondary Education Act of 1965 and some of the main concepts upon which this title was based. (A more complete exposition, including a description of some of the compromises or trade-offs effected in the development and passage of ESEA 1965, is presented in Appendix B.) This section highlights the main focus of Title III: that of stimulating and supporting significant educational reform in the never-ending quest for quality education, and the need for some "outside" agencies (ones not primarily concerned with providing educational programs and services on a day-to-day basis) to focus *specifically* on stimulating and catalyzing this desired process of educational development and change.

It must be emphasized strongly that the stress placed on educational development, reform, or change in this report or in the provisions and guidelines of Title III or by PACE Centers or by other responsible change agencies is *not* simply to produce "change" *per se*. Even significant change can be effected in educational programs and services without improving quality or increasing the efficiency by which resources are converted into learner benefits. However, by definition, significant improvement in the quality of education, in the equality of educational opportunity, and in the responsiveness of our instructional processes to the needs of individual learners is not possible without change. Change is not only an environmental condition with which our educational institutions must cope, it is the vehicle they must employ, hopefully in a planned, purposeful and coordinated fashion, in adapting new, tested educational discoveries and developments to the benefit of their students, and in a continuing renewal process.

ESEA 1965, and particularly Title III, was viewed by many of its progenitors and developers as a stimulus toward quality education and support for those changes required to produce improved education. However, the *rationale* *was not* well articulated, particularly in terms of spelling out the interdependence and the complementarity of roles of various agencies in our educational systems as they deal with the several steps in the educational change process.

The second section in this chapter reviews several concepts or "models" of the educational change process as treated in the research literature. The purpose of this section is to (a) define the several stages or steps in the educational change process (also sometimes referred to as the innovation adoption process), (b) review some of the difficulties of moving a new educational development or innovation through these several stages, and (c) suggest a system of role differentiation among agencies and institutions involved in various stages of the educational change process.

The third and last section in this chapter summarizes observations by a number of respected educators regarding the successes and failures of Title III. It includes some of the findings and conclusions from the nationwide study of the results of the first year of operation of Title III. This review suggests a number of guidelines for the administration of Title III, particularly with respect to the unique role and functions of PACE Centers in supplementing the differentiated roles and functions of other agencies participating in the educational change process. Some of the major conclusions from the nationwide study which were confirmed by this study are incorporated into the general conclusions and recommendations reported in Chapter I.

A. THE PRINCIPAL THRUSTS OF ESEA TITLE III

The passage of the Elementary and Secondary Education Act (ESEA) 1965, has been hailed as probably the greatest landmark in the history of Federal aid to education. Like other important social legislation, it was the product of a variety of intellectual, economic, political, and social forces. Important in the development of this Act (see Appendix B for a more detailed exposition of the genesis of the Act and the rationales behind the provisions of Title III) were the efforts of President Kennedy to provide for general aid to education, President Johnson's commitment to make Federal aid to education one of the two central domestic issues in his Presidential campaign, the contributions of Johnson's Task Force on Education chaired by John Gardner, the individual contributions of Commissioner of Education Francis Keppel and key members of his staff in the U. S. Office of Education, and the influence of various political figures and educational interest groups on the Congressional legislative process.

Historically, Congressional action on general aid to education bills had been frustrated because of anxieties regarding three important issues: (a) the fear of Federal control of education, (b) church-state relations, and (c) the use of Federal aid to force racial integration of schools. The Civil Rights Act of 1964 served to remove in large measure one of the more controversial issues from this legislative struggle. Kennedy's administration induced a new readiness to develop a workable compromise regarding the church-state issue. Sputnik, the voices of critics of our educational processes, poverty, the plight of the disadvantaged, and the crisis of the cities all had important implications regarding recognition of the need to improve the quality and effects of our educational system.

The design of President Johnson's Great Society programs was importantly furthered by various developmental groups or task forces. President Johnson's charge to the Education Task Force was to develop a fresh dialogue and to "think big" about ways to bring about significant constructive change in education: change which would deal more effectively with the critical issues of our times. This task force developed three concepts which later became the philosophical base of Title III provisions in ESEA 1965.

The first concept stressed the development and support of larger scale, "model" institutions and programs. It was recognized that there had been an abundance of new ideas and research projects but that very little substantial change had been effected in our educational system from these relatively isolated, piecemeal or small-scale developments. It was evident that the basic problem was not so much in generating new ideas as it was in converting and adapting them into forms usable in the classroom and in actually getting them adopted in schools where they would serve to produce more effective education and on a scale where "the difference would really make a difference."

A second concept was based on the recognition of the need for strengthened and extended services to teachers and for enrichment of the educational experiences of children. It was later recognized that these supplementary services could not be supported to the extent necessary to make them available wherever they were needed, so the criteria of innovativeness and exemplariness were evolved to assist in deciding which projects to fund on a demonstration basis. It was expected that those programs and services which were found to have significant beneficial effects would then be supported by the demonstrating school districts and adopted by other districts which learned, through a purposeful information dissemination process, of the efficacy of such programs and services.

The third concept stressed the need for establishing or supporting and capitalizing upon various educational change agencies "outside" the traditional system of education. The assumption was that the traditional elements of our education system are so thoroughly involved in maintaining, tuning up, and adjusting already established and ongoing programs, processes, and services that they have little time or inclination to "rethink" the educational process and adopt new concepts and processes which would significantly upset the status quo. Therefore, the task force believed that new agencies and patterns of community involvement should be established for the purpose of stimulating and supporting significant change toward quality education. This thinking resulted in the concept of a second type of supplementary educational centers: those designed to bring about constructive change in schools by providing assistance "from the outside in" in planning and disseminating new and significantly improved educational programs and services.

As Title III finally evolved under its original Advisory Council, a number of thrusts became evident which were directed toward the purposeful stimulation and support of quality education. These were:

(1) an emphasis on fewer major, multi-purpose, high cost, visible projects which would "make a difference" rather than on many single-purpose, broadly scattered, low cost projects;

(2) the primary focus on supporting truly meaningful and significant educational reform;

(3) the strategy of generating broader community support and involvement and of incorporating assistance from agencies other than those comprising the traditional educational system to work "from the outside in;"

(4) an emphasis on the high priority needs of students;

(5) an insistence upon innovative or exemplary characteristics of projects approved and funded;

(6) the importance of demonstrating successful solutions to important educational problems and disseminating information about such successes;

(7) the use of direct relationships between local education agencies and the U. S. Office of Education to assure creativity, flexibility, quality, and objectivity;

(8) the importance of involving private as well as public schools in the projects approved and funded;

(9) the use of 100 percent Federal grants to fund approved projects; and

(10) the establishment of statewide as well as nationwide competitions among agencies submitting project applications in order to assure quality proposals and the most effective use of the limited resources available.

It was not until later that the evaluation of project results was stressed; and it was only recently that Congressional amendments to ESEA 1965 turned over the administration of Title III to the respective state education agencies.

Even though the Act and its subsequent guidelines stipulated a number of criteria that project applications must meet in order to be seriously considered for funding, little attention was given to how either individual projects or the increasing streams of approved projects would actually bring about widespread and significant improvement throughout our education system. Innovativeness of projects and the demonstration of exemplary new packages of high quality educational programs and services were highly stressed. Considerably less emphasis was given to: (a) procedures for evaluating projects and their results; (b) methods of effectively disseminating information to relevant audiences about such projects;

and particularly (c) the systems and processes by which successful approaches could be diffused into districts and schools not hosting a demonstration project.

Since these issues are critically important to the desired goal of capitalizing most effectively upon the inherent potential of ESEA Title III and, particularly, of the PACE Centers in inducing and supporting widespread, constructive and significant improvement in educational programs and services offered by school districts, it is appropriate now to consider the educational change process and how various agencies can fulfill differentiated and complementary roles in the several stages of this process.

B. MODELS OF THE EDUCATIONAL CHANGE PROCESS

> "In a society like ours, academic patterns change more slowly than any others. In my lifetime, in England, they have crystalized rather than loosened. I used to think it would be about as hard to change, say, the Oxford and Cambridge scholarship examinations as to conduct a major revolution. I now believe that I was over-optimistic." (C. P. Snow)

A significant contribution to the investigation of the change process in education was made by Brickell[1] in 1961. He further extended his thinking and recommendations in a most useful book edited by Miles.[2] From his study of the dynamics of innovation in school systems, Brickell postulated three phases of instructional innovation:

1. Design--program design is a translation of what is known about learning into programs for teaching. The ideal circumstances for the design of an improved instructional approach are artificial, enriched, and free.
2. Evaluation--program evaluation is a systematic testing of a new instructional approach to find out what it will accomplish under what conditions. The ideal circumstances for the evaluation of a new instructional approach are controlled, closely observed, and unfree.
3. Dissemination--program dissemination is the process of spreading innovation into schools. The ideal circumstances for the dissemination of a new approach through demonstration are those which are ordinary, unenriched, and normal. (Brickell notes the reaction of educators to the idea of creating a

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[1] Brickell, H. M., Organizing New York State for Educational Change, Albany, New York: State Education Department, 1961.

[2] Miles, Matthew B., Innovation in Education, Bureau of Publications Teachers College, Columbia University, New York, New York, 1964.

state sponsored centrally located experimental education center for the demonstration of novel programs: "Too articial. What can we learn from a 'show off' school where specially selected teachers and specially selected kids, using the best equipment and materials, perform in a sort of convention atmosphere?")

Brickell purposely omits research as a phase of the instructional innovation process. Basic research in education, as he sees it, is the study of the circumstances, processes, and effects of human learning. If it were simply a matter of logic, basic research would precede the design phase in a linked process. He notes, however, that the logic of the sequence is seldom followed. "Most educational innovation does not flow methodically from basic research findings, but is undertaken quite independently." While he firmly believes that the best designs for teaching will come from the conscious, deliberate, planned translation of fundamental studies of learning, he does not propose that basic research should be supported by states or carried out through the state bureaucracy. Instead, he believes that such research should be supported through national funds because it produces the most universally useful information and therefore should have the broadest financial base. We support his position.

Another paradigm of the educational change process continuum is supplied by Guba and Clark.[3] The four stages in this continuum are:

1. Research. Research has as its basic objectives the advancement of knowledge. The researcher is not concerned, nor should he be, with whether or not his research has an evident practical application. He needs freedom to pursue his ideas wherever they may lead; he needs to be free to fail on occasion; he needs to be free from pressures for an immediate payoff. Research provides one input for the next phase of development.

2. Development. Development has as its basic objective the identification of operating problems and the formulation of solutions to those problems. The developer, unlike the researcher, is acutely concerned with practice. It is his job to make practice conform to the highest ideals that can be set for it, to be constantly probing the system to determine what, if anything, is keeping it from functioning at its best, and then to devise new approaches and techniques to ameliorate or eliminate whatever problems he may identify. Development requires coming up with an answer that will work in the real world. It must be a solution that can be adapted into the system. It must be one that is usable by the personnel available. It must get results. Thus, development involves production, engineering, packaging, and testing a proposed problem solution or invention.

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[3] "Categories of a Theory-Practice Continuum." Guba, Egon G. and Clark, David L., An Examination of Potential Change Roles in Education, NEW-CSI Seminar on Innovation in Planning School Curricula, Aerlie House, Virginia, October, 1965.

3. Diffusion. Diffusion has as its basic objective the creation of awareness of new developments and the provision of opportunities for their assessment along whatever dimensions practitioners may deem necessary. The most potent solutions that men can devise to overcome their problems have little utility if practitioners are not informed about them or if they have little opportunity to discover how the solutions work. Diffusion, in short, makes the solution available and understandable to the practitioner.

4. Adoption. Adoption has as its basic objective the adaptation of a development to the local situation and its installation therein. This is by no means an easy task. Every situation has its own peculiarities, so that it is unlikely that a newly developed problem solution, an invention, as it were, can simply be slipped into place without considerable modification to itself, to the system, or to both... Assimilation (of the development into the system) may involve the training of local personnel, obtaining new kinds of resources, modifying available facilities, arranging appropriate scheduling, changing behavior patterns or even values, and the like.

The PACE Manual[4] states that "projects (for Title III funding) may be developed which (1) invent a creative solution to a problem, (2) demonstrate an exemplary program which might be suitable for widespread use, or (3) adapt an exemplary program to local requirements and organize its incorporation into the educational program." PACE identifies and describes the stages of the innovation adoption process as follows:

1. Inquiry. Knowledge from basic research is formulated into ideas and theories that can be used in inventing solutions to educational problems. Thus, it provides the intellectual raw material from which improvements can be invented.

2. Invention. Applicable theory and research results are engineered into improvements that can be introduced into schools. The invention stage includes the design of an innovation and its refinement, including feasibility testing. Finally, these improvements are arranged into an organized program which can be demonstrated.

3. Demonstration. Improvements which have been engineered and tested in the invention stage are illustrated as working models that can be emulated and adapted. The demonstration stage creates widespread awareness of useful innovations. It enables educators to examine the feasibility of innovations, to understand the factors affecting their use, and to consider their adaptation to other settings.

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[4] A Manual for Project Applicants and Grantees: Title III Elementary and Secondary Education Act, U. S. Government Printing Office, Revised May, 1967.

4. Adaptation. Innovations that have been demonstrated in exemplary programs are adapted to local situations. The adaptation stage promotes the widespread acceptance and appeal of an innovation and encourages its adjustment to the unique requirements of particular situations.

In spite of the differences in nomenclature and in the number of discrete steps defined in the educational change process, there are important similarities among these three paradigms which are quite useful for our purposes. Associated with these three paradigms, and with other modifications of them, is a considerable body of literature devoted to the study of strategies for bringing about educational change.

There is growing evidence in this literature of the need for differentiation of roles among individuals and institutions associated with different stages of the educational change process. Galbraith[5] has pointed out that the most important consequence of the application of new knowledge and technology to practical tasks to which it applies is enforcing the division and subdivision of any task into its component parts and the bringing to bear of appropriate talents to each of these parts. Everett Rogers and Ronald Havelock, University of Michigan, are two other writers who have devoted particular attention to the roles of individuals and institutions which link researchers to practitioners in the process of assisting in the dissemination and the utilization of new knowledge. In spite of the admitted fact that there are no final answers or perfect solutions to questions about the best ways of converting new knowledge into practice, many of the ideas developed by writers regarding the change process in education can be useful to us in attempting to more accurately rationalize the roles of Title III Supplementary Educational (PACE) Centers in the so-called "system" of education in California.

The literature suggests that members of the research fraternity (including a number of "developers") do not communicate or interact effectively with members of the fraternity of practitioners. Havelock[6] characterizes this difficulty of interaction as "the knowledge gap." He suggests that these two fraternities represent two different social systems, each defined and identified by its own set of rules, values, languages, and communication patterns. The norms of each system also define their separateness from each other. The inadequacy of shared values, common perceptions and interests, and intersystem communication patterns frustrates effective communication and interchange. He reviews various roles which seem to serve the primary function of "knowledge linking" and indicates what types of linking roles seem to be most suitable and effective for given linking tasks. He suggests characteristics and skills which should be considered in recruiting and training linkers, and he comments on the kind of institutions which should be created to secure these roles and to make knowledge linkage an embedded feature of our national educational system.

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[5] Galbraith, John Kenneth, The New Industrial State, Boston: Houghton Mifflin Co., 1967.

[6] Havelock, Ronald G., "Dissemination and Translation Roles," Knowledge Production and Utilization in Educational Administration, T. L. Eidell and J. M. Kitchel, editors, published jointly by University Council for Educational Administration, Columbus, Ohio, and Center for Advanced Study of Educational Administration, University of Oregon, 1968.

The social structure of universities and the values manifested by university faculty and those researchers closely associated with universities largely preclude the effectiveness of such individuals in the linkage role of communicating and working with practitioners. In the typical university complex there exists a hierarchy of preferred roles. At the top is the prestigious researcher/scholar. He develops new knowledge. Next in the hierarchy is the scholar/specialist who teaches graduate and undergraduate students in a particular discipline. Next are educators who train students in professions and in applied occupational specialties. At the bottom is the individual responsible for teaching in extension courses, continuing education, and for "retreading" practitioners.

Universities, particularly those recognized for their strong graduate studies programs, are typically pervaded by an attitude which deprecates practitioners and "practical" courses. This attitude makes the special role of "linker" all the more vital since the researchers themselves tend to lack the motivation to reach out and establish effective linkages with users in actual practice. To the degree that educational research and development centers and regional educational laboratories are staffed with individuals who have been conditioned by the university system and share the values of universities, they may be expected to have difficulty in establishing effective working relationships with practitioners in school districts who might wish to learn of and try out their products. It seems likely that this "university ethos" may be more pervasive in educational research and development centers than in the regional educational laboratories since the latter are less concerned with pure and applied research and more concerned with product development: a function closer to the needs of actual users.

There is an obvious requirement for more effective linkage in relating the results of individual researchers to the needs and practices of users. This is evident in the relative lack of practical impact of the many projects carried out under the Cooperative Research Act of 1954. This act gave unparalleled impetus to the support of research in education in universities, particularly in schools of education. The fact that little significant change in educational practice has come about through the direct application of the results of $100 million of Cooperative Research projects has not been lost upon key decision-makers in Washington. They now are greatly concerned with the relevance and applicability of the results of investigations to actual educational practice. In their view, contribution to knowledge has become less important than the contribution to improving educational practice and to solving educational problems of national and regional significance. Thus, there is a requirement for more directed and purposeful development activities related to priority problems and for the use of linking agents to assist in the diffusion and adaptation of tested products in a broad variety of educational settings.

Havelock[7] concludes that "for the foreseeable future all fields of knowledge will require the installation and support of a variety of linking roles if effective utilization is to be realized." We would add that the need for these linking roles is enhanced when knowledge in a particular field is being generated rapidly and by a variety of sources, and also when a considerable time gap or cultural lag exists between initial instances of effective applications of new knowledge and the time those applications become common practice. The need for special kinds of linking roles also may be greater when confusion exists as to the relative quality or appropriateness of newly available possible "solutions" to recognized problems. These conditions certainly apply at present in the field of educational development and change.

Figure 1 graphically displays our concept of possible differentiation of role and emphasis among various institutions and agencies as they appear best able to deal with the functions associated with each of the stages in the educational change (innovation development and adoption) process. The vertical dimension of the blacked-in figures indicates the range of involvement in the various stages of the process. The width of the figures connotes the extent of activity in each of the stages spanned.

In the vernacular of our youth, each of these types of institutions and agencies is both primarily interested in and best equipped for doing "its own thing." Thus, universities and the newly established educational research and development centers concentrate primarily on the stages of research and inquiry and are less involved in the stages of design, development, invention, and evaluation. The regional educational laboratories are primarily involved in the stages variously labeled design, development, invention, and evaluation. To a considerably less extent they are involved in the stages of inquiry, diffusion, demonstration, and dissemination.

The charters of the regional educational laboratories that have evolved since their establishment in May, 1966, include the following general functions:

(1) developing new educational programs and activities, and conducting some research;

(2) collecting and disseminating innovations throughout a region being served;

(3) setting up programs needed in their area;

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[7] Ibid.

Institutions and Agencies Associated with Different Stages of the Educational Change Process

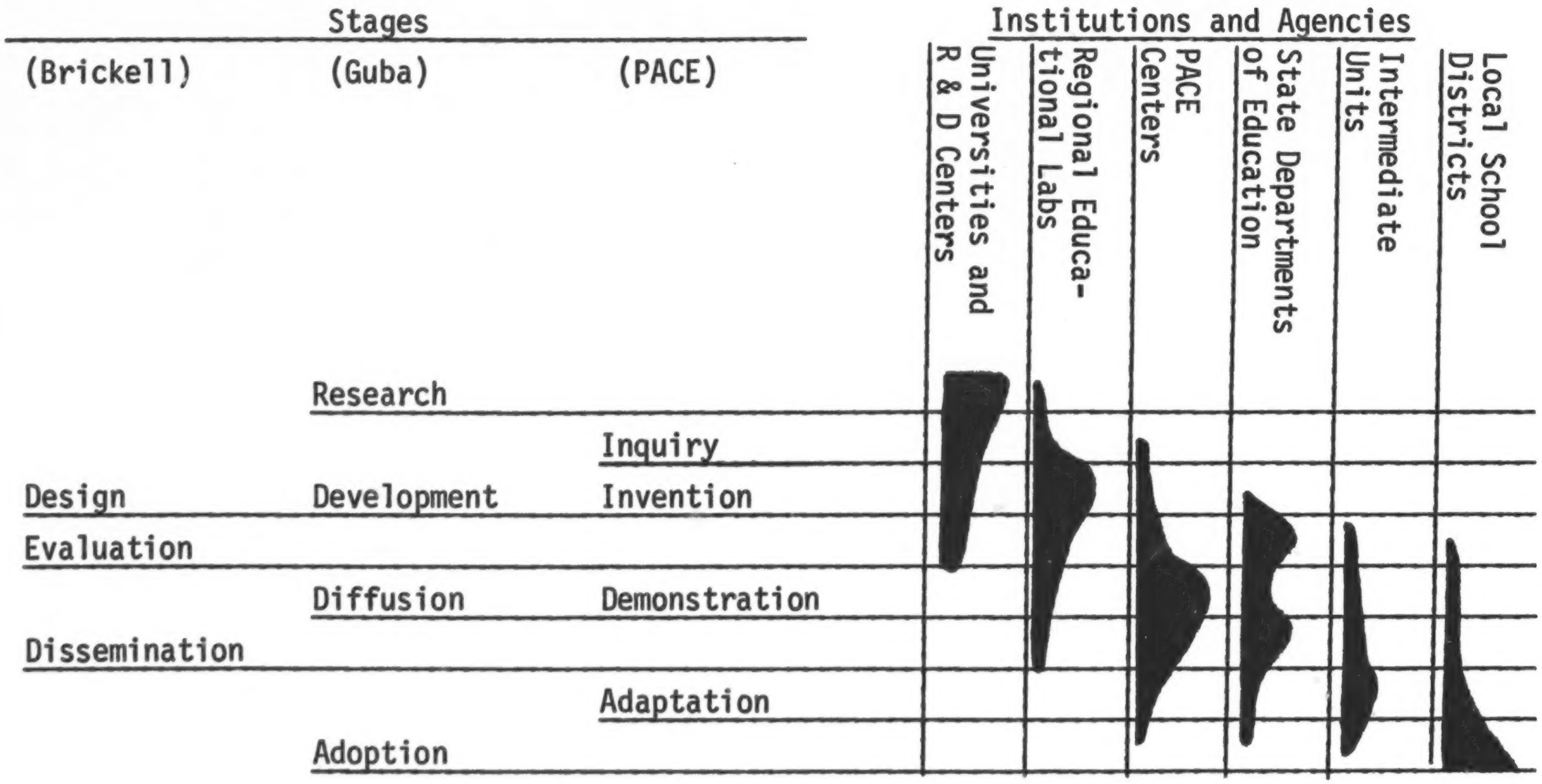

Figure 1

(4) training individuals for leadership; and

(5) translating findings of research into feasible education practices and programs.

As is the case with some PACE Centers, at least some of the regional laboratories appear to be attempting to be all things to all institutions. Miller's study[8] suggests that the most prominent justifications for the regional laboratories would be largely those of: (a) research and development, (b) the communication-diffusion-implementation continuum, and (c) training programs to equip educators for these tasks. Hilda Taba, a member of Miller's study team, saw the laboratories' role as follows: "The Regional Laboratories could perform a special link between the innovative ideas emerging from research and experimentation and the local dissemination, implementation, and modification of these materials. These Regional Laboratories could assume the role of the mid-wife between research and practice, of consolidator and integrator of scattered and partial efforts."

In spite of these suggestions and observations, and merely on the basis of our limited contact and involvement with regional laboratories throughout the country, we strongly doubt the value or advisability of chartering regional laboratories to focus major proportions of their efforts on the activities and functions related to the stage(s) of diffusion, demonstration, and dissemination. First of all, it would appear that quite a number of laboratories have little to disseminate or diffuse, at least at this point in time. By far, their greatest emphasis is now being placed on the development (design and invention) of new programs and products which are intended to be of signficant benefit to local school districts. Further, the limited number of regional educational laboratories and their wide distribution around the country suggest that their resources would be strained to the utmost in attempts to widely disseminate, diffuse, and test in demonstration settings the products of their development work. Also important is the fact that the "product line" of each of the regional laboratories will be quite limited, since each laboratory is supposed to adopt a specific primary mission and focus its efforts on development in a given area.

For example, the Far West Laboratory for Educational Research and Development in Berkeley, California, considered several possible primary missions (teacher education, assessment, educational change, communications, goals of education, and interaction) before adopting the teacher education program for study and development.[9] In carrying out its planning process the laboratory explicitly considered its relationships to the programs and activities of other insititutions and agencies:

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8. Miller, Richard I., Catalyst for Change, A National Study of ESEA Title III (PACE): USOE Contract No. OEC 2-7-000074-0074, January 31, 1967.

9. Program Plans, March 1, 1967, Far West Laboratory for Educational Research and Development, Berkeley, California

> "The teacher education program will involve a close partnership between the Stanford Research and Development Center, the Far West Laboratory, selected Title III (PACE) Centers, and schools in the region. The basic research evidence and theoretical rationale developed at Stanford on the use of microteaching and other techniques for pre-service teacher education will be applied to the development of the inservice packages at the Laboratory. A well-integrated team effort involving the Stanford Research and Development Center, the Far West Laboratory and Title III (PACE) Centers would assure a thorough coverage of all aspects of the research and development effort in the area of inservice education." (See Figure 2.) "The cooperating group of Title III (PACE) Centers and their affiliated public schools would contribute to development, field testing, demonstration, and implementation of the inservice training packages. It is anticipated that this program will also involve several colleges and universities in specific activities in which they have special interests . . ."

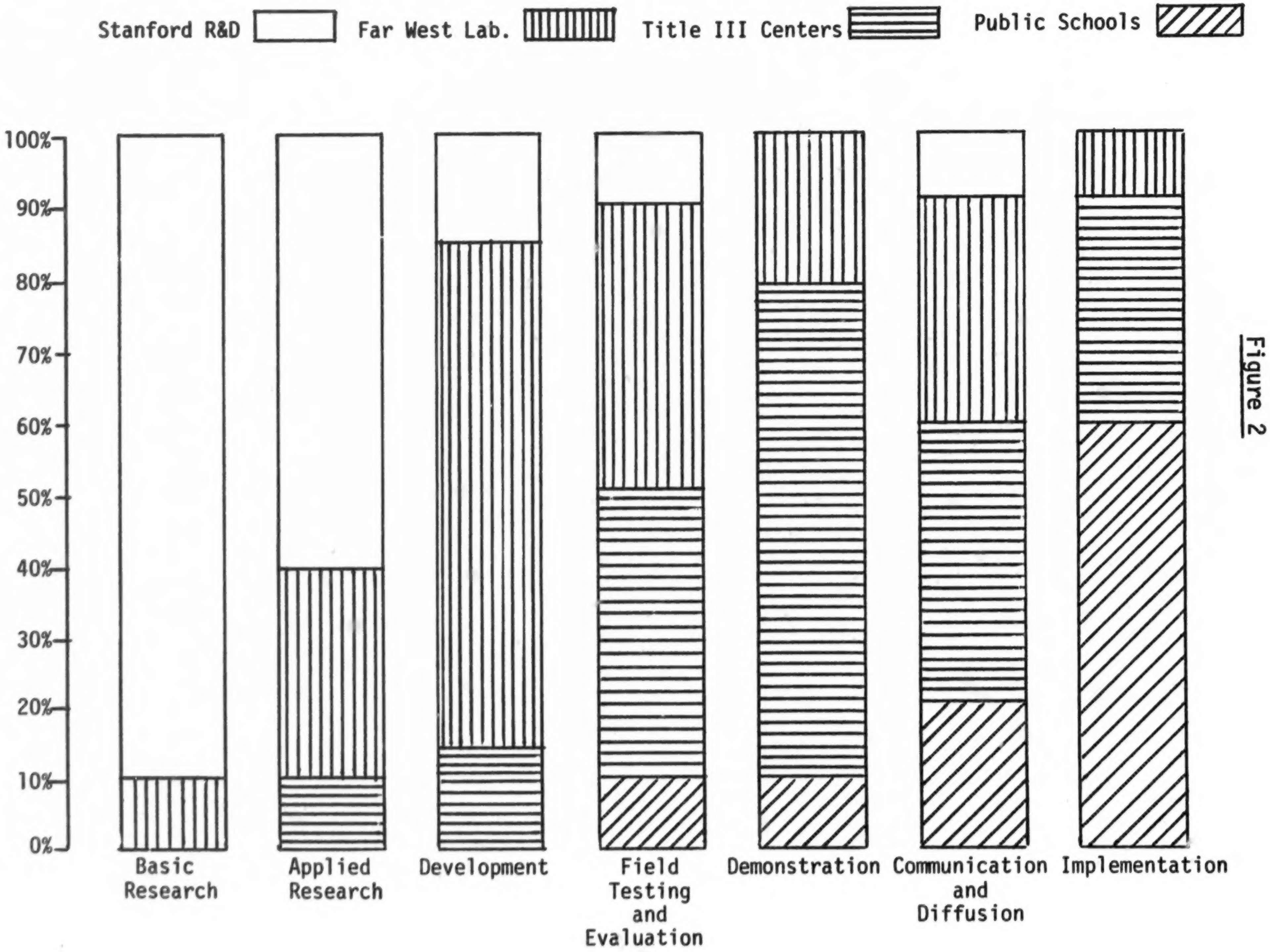
Figure 2 shows the estimated contribution of the cooperating activities of the Stanford Research and Development Center, the Far West Laboratory, the PACE Centers, and public schools in the seven stages of implementing change which were considered by the Far West Laboratory. The position we have taken earlier and the position adopted by the Far West Laboratory are congruent in several important respects. First of all, the Laboratory would be responsible for the major portion (70 percent) of the development effort. PACE Centers would share importantly and equally with the Laboratory in the stage of field testing and evaluation. The PACE Centers would be responsible for approximately 70 percent of the demonstration effort; and they would be the most significantly active agency in the communication and diffusion effort, being responsible for approximately 40 percent of this total activity. PACE Centers are also viewed as having an important contribution to make (30 percent) in efforts toward implementation of the new program.

We share and strongly support the views reflected by the Far West Laboratory of (a) the importance of interdependence among agencies and institutions participating in the educational change process, and (b) the need for differentiation of role, responsibility, and effort among agencies involved in varying degrees in the several stages of the educational change process. It is important that this interdependence be recognized and accommodated. Education is too important a matter in our country for any one set of agencies or institutions to feel that it "owns" or has the prerogative of controlling any of the stages or processes of educational development and change.

Figure 2

ESTIMATED CONTRIBUTION OF COOPERATING ACTIVITIES TO ACHIEVEMENT

OF DIFFERENT ASPECTS OF THE TEACHER EDUCATION MISSION



Our study team has concluded, and we hope it is also evident to the reader after considering Chapters II and III, that a number of agencies (e.g., universities, foundations, publishers, educational research and development centers, and regional educational laboratories) are focusing purposefully--and, apparently, rather effectively--on the research, inquiry, design, development, invention, and evaluation (the primary focus of the UCLA Research and Development Center) stages of the educational change process. Nationwide, the diffusion stage (including demonstration, evaluation, dissemination, adaptation, and adoption) is significantly less well served. We believe strongly that, among the several institutions and agencies shown in Figures 1 and 2, a network of regional PACE Centers appropriately chartered, funded, managed, staffed, and modeled along the lines of those in California and supported by an appropriately organized state level administrative unit could deal most effectively with the general stage of diffusion (as defined above).

Chapter III treats in some depth the interdependent and complementary differentiated roles of the traditional elements of California's education system with regard to their relationships with PACE Centers and with the general diffusion stage of the educational change process. However, before beginning that discussion let us review some other comments and conclusions about the potential and the results of ESEA Title III and PACE Centers.

C. REVIEW OF COMMENTS AND CONCLUSIONS FROM OTHER STUDIES OF ESEA TITLE III

The material presented in this section is based very largely on Miller's USOE financed study[10] of ESEA Title III for the Congress. We have summarized and paraphrased a number of observations in that report; thus we are responsible (and apologize) for any violence done to the spirit and precision of those observations. Quotations not otherwise indicated are Miller's statements. We have identified our own observations and interpretations.

The initial response to Title III was one of "riding off in all directions." In some respects this untidiness was probably a good thing because it encouraged action and reaction on a broad front. It allowed USOE officials and consultants to base subsequent decisions upon a variety of experiences and it brought about a gradual refocusing of the activities and priorities connected with the title.

Most of the 20 special consultants on Miller's study team were favorably impressed by the overall accomplishment of PACE during its first year. In addition, they were optimistic about further accomplishments in the future.

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[10] Miller, Richard I., Op. Cit.

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> "From the beginning, Title III has been regarded as the creative title, the one committed to--and most likely to--advance education's state of the art." (Harold Gores)
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> "Of all parts of ESEA, Title III is perhaps the most exciting and, without doubt, the most challenging." (Harry Passow)
>
> "Only in America do we find national legislation explicitly to foster innovation and change in education as goals in themselves." (Thomas Pettigrew)
>
> "Title III has generated a tremendous amount of discussion of educational programs and of the dynamics of change which is bound to leave its mark no matter what the quality of the specific products is." (Hilda Taba)

These consultants also pointed out several shortcomings in the design of Title III project proposals. In so doing, they remind us that analysis of any program for massive Federal aid to education is bound to result in one fundamental generalization: weaknesses in Federal programs closely parallel weaknesses in the broader spectrum of American education.

> "Ratings of a sample of approved projects by outside readers, USOE readers, and Title III officials on fifteen evaluative criteria indicate that: (a) identification of needs (establishing priorities), (b) information about similar projects, (c) evaluation, and (d) dissemination, are major weaknesses. This can also be said about American education in general."

Webster defines evaluation: "to ascertain the value or amount of; to appraise." Egon Guba conceives of evaluation as a decision-making as well as a judgmental device, and most educators do not define it at all. It is little wonder that lack of evaluation plagues Title III; it plagues Title I and most other Federal and non-Federal programs. It may be that a new order is on the way, however slowly it may be approaching. President Johnson in his 1967 State of the Union address said that "every (Federal) program will be thoroughly evaluated." It would appear that in Washington, at least, evaluation is now the name of the game.

Harold Howe, Commissioner of Education, has been bothered by the "buddy-buddy" relationship between innovators and evaluators: "If the innovators successfully capture the evaluators, then what the evaluators have to say won't amount to much. If they aren't captured, what they will be doing--whether they realize it or not--is trying to find devious ways to prove that the innovators are right. One of the greatest shortcomings of modern day educational innovations, to my mind, is that by and large the innovators have captured the evaluators." This observation supports our contention that, by and large, evaluation is a poorly handled process with regard to Title III projects and, as a result, all too often such projects are "doomed to succeed" (at least during the period of Federal funding) by virtue of inadequate or biased evaluation.

The consultants in the Miller study, having found PACE proposals lacking in sound, creative procedures for evaluation, were of two minds about the remedy: (1) One group would have each proposal contain an explicit evaluation scheme, which is what the guidelines now require (but in rather general terms), believing that these controls would result in better projects as well as firmer evidence at the projects' terminal point of what happened. (2) Another group of consultants, while not rejecting the need for better evaluation, would go slow, believing that creativity in innovation may suffer if the present traditional procedures for evaluation are applied too vigorously or too early. The view of this group was that evaluation procedures need to be as innovative and flexible as the new educational programs being developed and tried.

Some consultants commented on the lack of a strategy and planned procedures for the *effective* dissemination of the results of the demonstration project. What emphasis there was on "dissemination" primarily was that of preparing and sending out information about a given project in a rather shotgun, fire and hope, manner. *Strategies, procedures, and provisions for actually effecting change in schools not hosting a project were noticeably lacking.*

Miller recommends that every state should have a statewide center--probably jointly sponsored by the state department of education, a state university or college, and perhaps hooked into a regional education laboratory--for disseminating Title III and other materials developed within the state. We strongly concur with this idea. The obvious and critical need for such an "active resource" was basic to our recommendations for the establishment within California's State Department of Education of a Bureau of Educational Reference in the strengthened (and renamed) Office of State Educational Information Services, and for the establishment, under the Deputy Superintendent for Major Programs, of an Educational Innovation Dissemination Program, the director and staff of which would be responsible for stimulating significant educational development *of all kinds*, contributing to and capitalizing upon information stored in the previously mentioned Bureau of Educational Reference.

Title III project proposals require evidence of substantial community involvement in order to win approval. The way these community resources are used, however, varies greatly from token usage and window dressing to "bedrock planning." Miller found that college and university professors (usually in the field of education) were the most frequently used resource persons, yet the largest category of educators by number, i.e., the elementary classroom teachers, were listed next to the bottom in the frequency distribution of resources used in developing the projects.

> "This tacit vote of no confidence in the elementary classroom teacher is most unfortunate and is unlikely to aid projects in gaining classroom acceptance. Further, project directors should build community bridges for the future, rather than just for project approval. Whipping up community enthusiasm for a project could lead to a community backlash if the real role of community participation is window dressing."

The "school reform movement" of which Title III was to be the cutting edge, is a variety of efforts to give improved direction, substance, and meaning to education. Several main thrusts of the school reform movement are apparent in Miller's report. They are (in alphabetical order) content revision; educational technology; equalized opportunity, in terms of children from poverty environments and those from minority groups; individualized instruction; organizational flexibility; and teacher renewal.

> "The major curricular content revisions thus far have been primarily the province of the National Science Foundation and various other foundations, primarily Carnegie. There is no reason why Title III should attempt to move strongly into this area. Title III should assist selected major curricula studies in dissemination, demonstration, and implementation of their results and findings."

Dr. H. Thomas James, Dean of the School of Education at Stanford University, in a speech some time ago in Los Angeles, commented that much of the alleged innovation that was going on--particularly that relating to educational technology--seemed to be more or less a fake. His idea was that a number of districts were engaging in so-called innovative practices simply because Federal or state funds were available; that once those funds disappeared, the machines would go on the closet shelf, dust would gather on the materials, and the districts would go back to older, more comfortable, and certainly less expensive ways.

Miller found that three characteristics of Title III funds have critical bearing upon local acceptance: first, the grant is outside money; second, the money is temporary; and third, expenditures are restricted to a specific project or objective. He found that some superintendents are intentionally holding PACE programs at arm's length, rather than working seriously towards their injection and integration into the main stream, for two reasons: (1) some superintendents operate on the principle that "don't rock the boat" is the lodestone of good administration; therefore, Title III is threatening. On the other hand, (2) some superintendents may not have seen enough of their own program, for a variety of reasons, to have a firm view about how it might improve local education. This position can be a sound one, or it can be a stalling tactic. Norman Kurland observes: "There is some tendency for Title III to be isolated...at the local level; the situation of fully funded projects has been likened to that of the rich relative who is tolerated as long as he pays his way."

From analysis of projects funded during the first year of Title III operation, Miller's study team found a rural bias among the projects. The team believed that a stronger case should be made for metropolitan planning:

> "Projects which foster educational metropolitanism should be encouraged--recruited in some cases...The poverty, pessimism, and social dynamite in central cities have received much attention, and rightfully so. It is here that education faces its greatest challenge. Already the comprehensive high school is a thing of the past in the rapidly segregated nature of slum schools. Metropolitan planning is essential for future development of urban areas and their school systems. Studies completed thus far point to the great need for coordinated, areawide approaches to urban problems in education; they also point out the importance of education taking a more active role in coordinated attacks upon poverty, serving an active, leadership role in planning rather than a passive one."

However, Miller's study team warns against the temptation to view Title III funds as additional categorical aid for the improvement of education for one, albeit an important, population segment. Big city school systems are not necessarily the best environment in which to install and demonstrate significant innovations and educational developments. Title III proposals must represent attempts to try out something which offers hope of being substantially better than what has been common practice. Evidence of critical need by itself is no justification for Title III funding.

> "School administrators and coordinators of Federal programs [and we would add: state legislatures, state boards, regional USOE personnel, and county superintendents] need to be particularly careful about fitting Title III into the Title I mold. They must not or they will kill it. The tendencies to do this are probably more subconscious than anything else, emerging from desires for administrative and procedural efficiency."

Unfortunately and in spite of Miller's admonitions, a number of agencies--including, importantly, the USOE itself--have proceeded to do just this. The design of the San Diego Inner-City project, funded for approximately $750,000, was significantly influenced by such pressures.

Miller's study sees significant advantages and opportunities in the creative packaging of various complementary Federal and state programs--but indicates that these advantages and opportunities remain generally unexploited. He recommends that a national study be made of how and where various Federal education programs could profit from closer cooperation and mutual support. Also mentioned is the possibility of incorporating various foundation-supported activities into this partnership.

A survey of 723 project directors in Miller's study identified three major problems in getting projects under way. The most critical problem was that of finding qualified personnel. The second most critical problem was that of delays in funding and delays in obtaining project approval. The third problem was related to the acquisition of equipment and materials in a timely manner. The problem of the availability of competent people in education, particularly as it relates to educational development and change, will become much worse before it (hopefully) gets better. USOE officials are aware of the timing and funding problems but the matter is not really theirs to control.

Commissioner Howe makes a strong plea for a more rational educational funding pattern--one tuned to the school year rather than the traditions of Congress:

> "The timing with which Congress appropriates funds could scarcely be better designed to make the job of the local school superintendent difficult. I hasten to add that Congress intends no inconvenience. It is just doing business as it always has."

After a thorough investigation of the issues and survey data, Miller's study team recommended that the responsibility for and the administration of Title III should remain in the USOE. While there was noted a requirement for the states to assume a stronger role in the partnership with the Federal agency and that state departments should receive a 4 percent allocation of overall state Title III appropriations for state level activities, the advantages of administration at the Federal level appeared to outweigh those of administration at the state level. The report observed that the quality of state Title III coordinators ranged from a few first rate educators to a few political patrons of the state superintendent.

Miller's study recommended that PACE Centers (Centers for Educational Improvement--CEI) should focus upon the "process" dimensions of education, including retraining. Glen Heathers commented that, "Title III's chief area of invention and demonstration should lie in developing approaches in designing, implementing, evaluating, and disseminating comprehensive school improvement programs that incorporate innovations."

Regarding even further specialization, Miller writes:

> "Some states have thought of developing specialties within the CEI's (PACE Centers) such as having one center specializing in urban problems, another in educational technology, another in the arts and humanities, and so forth. This strategy may work well in smaller states, but in Texas and California the distance problem may be a substantial handicap."

Although we concur strongly with the caveat regarding the problem of distance in California, we have additional reservations about the appropriateness and feasibility of specializing to this degree among the several PACE Centers of the State.

> "A problem may arise if the CEI's are hooked into the intermediate units that are legally established by the state. Such arrangements need to be made carefully so that the creative edge of PACE is safeguarded. (Emphasis added.) Title III money must not be used to do the types of work that should be done by the state departments of education, and neither should these monies be used to subsidize the regular staff and ongoing programs of the intermediate unit."

The future success of PACE is by no means assured; in fact, the honeymoon period is about over and the obstacles and problems may become more vexing in the period immediately ahead. A very real problem--one that may afflict all new thrusts--was succinctly expressed by John W. Gardner when he wrote: "Great ventures start with a vision and end with a power structure."

> "Title III needs to stay clear as possible of political entanglements, and this will not be easy. [In fact, that's like advising honey to stay away from bears.] Increasing pressures will be applied on USOE Title III officials to develop priorities that advance this or that cause, many of which have strong political overtones. The future growth of PACE should rest on what it does to improve the quality of education."

In summarizing the report of his study team, Miller writes: "Considering everything--weaknesses and strengths, blunders and triumphs, politics and purity--Title III has thus far achieved outstanding success, probably more so than other ESEA Titles."

III. BRIEF DESCRIPTIONS OF MAJOR ELEMENTS OF CALIFORNIA'S EDUCATION SYSTEM AND THE RELATIONSHIP OF THESE ELEMENTS TO THE EDUCATIONAL CHANGE PROCESS

> "The Legislature hereby declares that there is further need to encourage the adoption of new or improved educational ideas, practices, and techniques in solving critical educational problems in elementary and secondary schools throughout the state. Recognizing the need for the planning and developing of new programs involving a wide range of new approaches designed to improve the quality of education available in this state, this chapter is expressly enacted to foster innovation and creative change in education, based on research and proven need. It is the intent of this chapter to join together the United States Office of Education, the State of California, and local school systems to bring purposeful change and experimentation to schools throughout the state, through the use of all available resources of the state." (Assembly Bill 1865)

The text of Chapter II dealt primarily with: (a) the recognition of the need for stimulating and supporting significant, constructive change in our educational programs and services in solving important problems and in pursuing the goal of quality education for all; (b) the unique thrusts of ESEA Title III which are responsive to that need; (c) descriptions of models of the educational change process and the interlocking or interdependent roles of various agencies involved in that process; and (d) conclusions from other studies and observations of Title III and implications for the role and operations of PACE Centers.

This chapter deals more specifically with the context in which California's 21 PACE Centers must operate. It briefly describes the general missions, functional attributes, and problems of the three levels of administration in California's public education system, particularly as they are related to the issue of educational development and change. It concludes with an indication of the way in which California's network of PACE Centers can indeed supplement and complement the efforts of other agencies in stimulating and supporting constructive educational change.

A. STATE-LEVEL EDUCATIONAL ADMINISTRATION

The discussion presented in this section is based largely on the results of our two studies for the California State Board of Education.[1,2] The statement of mission recommended for the State Board establishes an overall perspective for considering possible patterns of interdependence and complementarity among the several educational agencies of the State.

> "The mission of the State Board of Education is to (a) govern the state system of public education and the State Department of Education; (b) initiate long-range planning; (c) define long-range goals, priorities, and comprehensive plans; (d) recommend policy goals and plans to the Governor and the Legislature; and (e) set policy, establish programs, and adopt rules and regulations within limits and according to the charters established by the Legislature. The Board's major concern is with the availability, appropriateness, and quality of public education throughout the State. It acts to assure equality of educational opportunity and to upgrade the quality of education by insuring the best possible use of all relevant and available resources.[3]

In order for this mission to be discharged effectively, the educational system of the State must carry out the following seven broadly defined major functions:

1. Sensing emerging needs for educational development in the State, and for related changes in the State's educational system.
2. Assigning priorities and allocating resources among areas of discovered need in the context of comprehensive and integrated State plans for education.
3. Providing for the design of improved instructional programs and services, and for the stimulation and support of new educational developments to meet the discovered needs.
4. Evaluating both new and established educational programs and services, the ways in which such programs and services are planned and administered, and requirements for redirecting allocations of human and material resources.

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[1] The Emerging Requirements for Effective Leadership for California Education, Arthur D. Little, Inc., 1964.

[2] A New Organizational System for State-Level Educational Administration: A Recommended Response to Emerging Requirements for Change in California, Arthur D. Little, Inc., 1967.

[3] Ibid.

5. Facilitating the dissemination of information regarding new instructional programs and services and their effects.
6. Encouraging and supporting the adoption of new educational developments and improved instructional programs and services.
7. Assuring the quality of educational offerings in accordance with legislative mandates and as required by regulations of the State Board.

These seven functions should be carried out in an iterative fashion. They are sequential in that each function is a "natural" consequence of the one before it. Actually, they should be portrayed in a circular, clockwise layout so that #1 (sensing/identifying needs for educational development) follows #7 (assessing/assuring the quality of educational offerings) in a cyclical manner.

It is obvious that these seven functions involve policy determinations as well as administrative activities. Responsibility for policy setting is shared among local district boards, intermediate unit (county) boards, and the State Board which, within limits set by the Legislature, establishes the overall policy framework. The administrative activities involved in these seven functions also are shared--with local district superintendents and staffs, intermediate unit administrators in the office of county superintendents of schools, and the State Superintendent of Public Instruction and his staff in the Department of Education--although the Department leads and coordinates the statewide administration of these seven functions.

We determined from our studies that these seven functional requirements were not sufficiently well carried out to meet the needs of the State. (On pages 3, 4, and 5 of our 1967 report[4] we list 13 important developmental requirements for state-level educational administration. These improvements are necessary if the seven major functions are to be carried out effectively.) In particular, a critical need exists for a coordinated, statewide system of educational development which would assure quality education for all learners irrespective of grade level, subject matter, race, family income, district wealth, district size or geographical location. This, of course, is a big order; but it is also most desirable. Such a statewide system of educational development requires the strengthening not only of the State Department of Education, but also (as we shall indicate later in this chapter) of the intermediate units and the local school districts. Moreover, we have concluded that additional attention, effort, and resources must be focused specifically upon the educational development process if the desired results are to be achieved. This reasoning was behind our recommendations to the State Board:

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[4] Ibid.

1. To periodically establish or convene a study group or panel of experts to identify emerging critical issues in education and suggest to the Board strategies for coping with them. (This was the rationale for establishing the State Committee on Public Education--SCPE.)
2. To establish an administrative system for major (multidivisional) educational development programs in the Department under the direction of a deputy superintendent in order to ameliorate the effects of "divisionalitis" and organizational fragmentation caused by functional and disciplinary specialization, and to provide a vehicle for utilizing talent from outside the Department on an *ad hoc* or term basis.
3. To establish a program planning unit under the deputy superintendent for major programs to assist in planning and coordinating all major programs cutting across and drawing upon resources from more than one division in the Department.
4. To establish under this deputy superintendent a major program of long range planning and Departmental development to collect information from within and outside the Department regarding indications of educational problems and opportunities, and, working with the Superintendent's Cabinet and the State Board, integrate this information into a regularly updated Master Plan for public education in the State; and to identify the developmental and renewal needs of the Department which are associated with Master Plan requirements, and coordinate the use of ESEA Title V funds in this purposeful "bootstrap" operation.
5. To establish under this deputy superintendent a major program of educational innovation dissemination to administer ESEA Title III and coordinate Departmental activities related to ESEA Title IV; to serve as a "switching center" for information related to Title III projects and the activities of PACE Centers, regional educational laboratories, and educational research and development centers; to consolidate and analyze educational needs assessment data generated by local districts and intermediate units with the help of PACE Centers; to organize and coordinate evaluation teams appraising the effects of Title III projects and PACE Center operations; and to interpret and transmit such evaluative data to the Superintendent and the State Board (via the recommended new assistant superintendent for Departmental program evaluation) to be incorporated in the Department's developmental planning and in the Board's (recommended) annual report on the status (quality and progress) of education in the State. (This broadly based program unit should be chartered to serve the administrative needs of the Educational Innovation Advisory Commission described in AB 1865.)

6. To establish the new position of assistant superintendent for Departmental program evaluation to supervise the design and coordinate the analyses of evaluation studies carried out by, for, and on various elements in the Department; he chairs the Departmental research committee (comprised of evaluation consultants from the project planning and evaluation bureaus of each division) which identifies requirements for evaluation studies and plans ways of measuring effects of proposed projects and programs; and he also coordinates the development of the recommended annual report on State public education, an assessment of the results of the Board's and the Department's stewardship of education.

7. To expand and upgrade the present bureau of systems and data processing to the recommended new office of educational information services, which would establish the California educational information system (CEIS) and include a recommended new bureau of educational reference--a sophisticated information storage and retrieval center to serve the needs of districts, intermediate units, PACE Centers, and other agencies with legitimate information needs, as well as the several major programs and divisions within the Department.

The main thrust of our recommendations for reorganization of the state-level system was to establish a new organic organizational system for state-level governance and administration of public education in California. An "organic" system is one in which the operational or functional characteristics and the structural configurations of an organization system are both (a) highly interdependent, and (b) related specifically, i.e., "custom designed" to the essential functions and tasks which must be performed in carrying out the missions of the system.

State departments of education, both in general and in California, are composed of organizational units which individually are oriented toward carrying out specialized functions, but interdependence and broadly based, coordinated planning and action among such units is typically decidedly lacking. There is a critical and continuing need for organizational development and renewal which will assure that relevant and available information and resources, wherever located (within or outside the State's educational system), can be effectively applied in upgrading the quality of education. This as yet unsatisfied need has important implications for the administration of Title III, the management of the network of PACE Centers, and the coordinated application of resources and capabilities of other related institutions and agencies in the State of California. (We shall deal more specifically with these implications in Chapter IV.)

It may be instructive to ponder the question of why the California Legislature became so actively interested and involved in Title III in 1968. Was it simply taking advantage of the new "pork barrel" afforded by the "Green Amendment;" or, was it reacting to its perception that no accountable agency was systematically assessing educational needs, assigning priorities, and acting in a responsible and purposeful way to upgrade the quality of education in the State by effectively managing the educational development process? Information made available to us suggests the latter possibility is more correct than the first. In the absence of a comprehensive, valid educational needs assessment, the Legislature used its own judgment. In the absence of well defined and justified priorities, the legislators set their own--and in statutory concrete. The incremental fragmentation of state-level leadership of educational development caused by the passage of the amended AB 1865 is slight compared to the effect the bill would have had if passed in its original form.

The Educational Innovation Advisory Commission chartered by the Legislature in AB 1865 can be a very constructive influence in supplying the needed additional and specifically focused attention to educational development and improvement in the State. However, even with legislative backing and the resources of Title III and the PACE Centers at its disposal, it will produce even more fragmentation and "noise" in the State's education system unless effective liaison, cooperation and coordination is established with the State Board (the agency which should be responsible for assuring the highest quality of education possible within the constraints of available resources) and unless the Department's administrative organization facilitates appropriate utilization of Title III allotments and PACE Center capabilities and potentials.

B. THE INTERMEDIATE UNITS

California's size and diversity, particularly with respect to the educational needs of its people, clearly calls for an intermediate unit between the state education agency and the local district. For over 100 years the Office of the County Superintendent of Schools has occupied that position and, with varying degrees of success, has filled the need for an intermediate unit.

At the Sacramento Inn Conference in January of 1965--as reported in the publication of that conference, Patterns for the Administration of Curriculum Development and Instructional Improvement, California State Department of Education--C. C. Trillingham, then Superintendent of Schools, Los Angeles County, spoke of the role of the Office of the County Superintendent of Schools in instructional development. He quoted several principles essential to sound educational organization, including the following two:

- "The State Agency for Public Education, the intermediate unit (or county), and the local district share responsibility for public education with unique functions for each to perform."

- "The intermediate unit is the coordinating and service agency for the local districts of the intermediate area; it also acts as an administrative and service extension of the state agency for public education."

Based upon these and other principles, Trillingham commented on the changing role of the Office of County School Superintendents and described in some detail the intermediate unit's three major functions: direct service, coordination, and operation. He also noted a pronounced trend in recent years toward the voluntary participation of two or more counties in cooperative projects, often in conjunction with the State Department of Education. He suggested that these joint endeavors have contributed to economy of operation, particularly in such matters as educational television; reduced duplication and overlapping in the preparation of curriculum publications; and capitalized on a rich array of available resources from all types of community agencies. He expressed the hope that these trends would lead naturally toward a new type of intermediate unit which would serve larger areas better than is now possible through the present 58 county offices:

> "If the intermediate units as envisioned for the future are to provide the coordination and service to district leadership personnel in defining goals, identifying problems, assessing needs, determining priorities, planning and adopting programs for strengthening curriculum and instruction, and checking the results, there must be clarifying legislation authorizing them to work with districts and the State Department of Education in such matters as (a) developing curriculum and instructional materials, (b) providing specialized inservice training of teachers, (c) participating in cooperative projects for developmental program planning, and (d) conducting needed research relating to the curricular and special services of the intermediate units.
>
> "In short, it is frank but true to say that it is difficult, if not impossible, for the present county schools offices to innovate or to participate in new and potentially valuable developments under present legal authorization.
>
> "It should be added that to provide this type of high level coordination and service in maintaining and upgrading the state system of education, the professional staff members of the intermediate unit must be sufficiently outstanding in competence to be able to provide the kind of service needed and to be respected and accepted by district personnel."

Reacting to conclusions in ADL's 1964 study report and to needs expressed at this conference, and in response to a resolution offered by March Fong, then a member of the Alameda County Board of Education, the California Association of County Superintendents of Schools and the County Boards of Education Section of California School Board's Association at its annual Asilomar conference meeting in March, 1965, authorized a study of the size, structure, role, and functions of the intermediate unit and its board of education. The "Committee of Ten" (five county superintendents and five county board members) was formed to carry out the study and its report was published in September, 1966. The major conclusions and recommendations from that study[5] are presented in full in Appendix D. That material further justifies the following conclusions.

Unquestionably, there is a critical need in California for the consolidation and strengthening of a number of Offices of County Superintendents of Schools in order to produce a network of intermediate units with the resources and competencies required to carry out the several important and demanding functions recommended by the Committee of Ten. As we have stated a number of times in the past, the political accidents which led to the establishment of county boundaries in California are not an appropriate basis for the organization and administration of an intermediate unit in today's statewide education system.

A number of states are developing intermediate units based on models demonstrated in both New York and California. In particular, the Board of Cooperative Educational Services (BOCES) Center in Erie County, New York, has been cited as a model, as have several of the stronger intermediate units in the State of California, particularly those where the county superintendent is appointed by an elected county board.

In California, county offices, even the strongest and the best staffed ones, generally have lacked a competent, well staffed unit to carry out comprehensive evaluations and needs assessments, and to assist districts in planning for significant educational development and change. In a few instances in California, a highly effective partnership has been developed between the PACE Centers and the Office of the County Superintendent of Schools to meet these needs, both of the county office and of the districts in the service area. Unfortunately, however, a number of county superintendents either have not taken full advantage of PACE Center potentials or have inhibited the application of such potential. If and when there is a reorganization of the intermediate units in California, they will need resource groups such as those represented by the stronger PACE Centers, and our recommendations provide for that so greatly to be desired possibility.

C. LOCAL SCHOOL DISTRICTS

School district organization in California is changing rapidly. Action by the State Board of Education and the Legislature has supported school district reorganization and consolidation significantly in the last few years. The establishment of unified school districts has significantly reduced the total number of school districts. Between 1920 and

1966, the number was reduced from approximately 4,000 to 1,218. The trend toward unification will probably continue in the future. The percentage of pupils in unified school districts in all of the United States in 1965 was approximately 88 percent. At the present time in California the percentage of students in unified school districts is approximately 64 percent.

The school district is the basic unit in the educational system and is responsible for the actual provision of the kinds of educational resources, materials and personnel which will meet the educational needs of the student in the district. It must also accommodate and attempt to rationalize the many different influences and forces impinging on it as it carries out its responsibilities. The district board of education sets policy within the framework determined by the Legislature, the State Board, and the county board. In so doing, its major function is to assure the highest quality of education possible within the constraints of available resources.

The district has a primary role in instructional development through the selection and assignment of personnel, the selection of at least some instructional materials, and in shared planning for continuing curriculum and personnel improvement. It has flexibility in using a variety of resources--local consultants, both within and outside the educational establishment, county and state consultants, professional associations, state and national foundations, college and university resources, and Federal programs. Lately, it has had the opportunity to utilize the assistance and resources from the new regional educational laboratories, the educational research and development centers, and the PACE Centers.

School districts in California vary widely on almost every dimension: tax base, expenditures per pupil, average daily attendance (ranging from 116 students in Alpine County Unified to 687,000 K-14 enrollment in Los Angeles Unified and Junior College), adequacy of staffing, programs for professional staff development, curriculum development, special education, voter support, proportion of disadvantaged students, use of educational technology, innovativeness, and propensity for interdistrict cooperation.

In his presentation to the January, 1965, Sacramento Inn Conference, Robert E. Jenkins, then Superintendent of Schools, Pasadena Unified and Junior College Districts and now Superintendent of San Francisco Unified District, cited the following weaknesses in the school districts' capacity to carry out instructional development:

1. It is almost impossible for a school district, working on instructional improvement to obtain really adequate summaries of successful curriculum approaches, supported by valid and reliable research and field testing.
2. School districts often find conflicting recommendations from various professional sources in the state and nation.

3. Due to lack of a developmental plan statewide, school districts frequently seek their own solutions to problems without any knowledge of alternate approaches that have been successfully developed and implemented in other schools. The end result is that districts often do not profit from each other's experience except where strong county or state leadership has provided helpful coordination.
4. Many districts do not have the consultant staff and resources needed to carry out the current district role effectively. The large and middle-size districts, with rich resource staffs, often have the advantage of serving as experimental centers for county and state projects, whereas there is not sufficient consultant staff to implement the successful programs throughout the state.
5. The lack of a coordinated plan statewide, and fragmented leadership has caused the Legislature, with a sincere interest in education, to mandate specific programs without reference to the overall coordination of the total educational program, or without the benefit of extensive planning and research, and often without the necessary financing. These actions, as sincere as they may have been, have tended to throw local programs out of balance and have eroded the effectiveness of the district board of education and its administrative leadership.

Jenkins summarized a great deal of the discussion at the Conference with this statement:

> "In conclusion, carefully coordinated developmental planning in California, along with adequate financing, should greatly strengthen the role of the school district in providing the finest educational program for students of all abilities, in every district of the state."

D. WHAT AGENCY HAS THE POTENTIAL TO DO THE MOST EFFECTIVE JOB OF CATALYZING SIGNIFICANT EDUCATIONAL DEVELOPMENT IN SCHOOL DISTRICTS ON A STATEWIDE, SYSTEMATIC BASIS?

In summing up the discussion in Chapters II and III, we might paraphrase the questions asked by the Little Red Hen:

1. Who will provide the array and depth of planning and evaluation resources required to effect significant educational development and change in California?
2. Who will design and implement a strategy for bringing about such change?
3. Who will develop instruments for assessing the educational needs of learners and assist districts in assigning priorities to identified needs?

4. Who will coordinate the utilization of new knowledge, of recent educational developments, and of complementary professional resources wherever they may be located in planned efforts to solve important educational problems?

5. Who will help to mobilize community support for improving the quality of education and to identify and make the best use of community resources?

6. Who will work with school districts in disseminating accurate information about the results of tested and successful solutions to important educational problems, and who will facilitate the diffusion of those solutions to other districts and help them adapt and implement the most appropriate solutions to local problems?

"Not I," said the USOE. "We only allocate monies, set up program guidelines, and make final go, no-go decisions about individual projects. But the educational establishment pressured Congress to make us turn over the Title III program to the states, so now we can do less than ever. And incidentally, 15 percent of this year's Title III allocations must be applied to projects for the handicapped; so good luck in funding any other new projects."

"Not I," said the Legislature. "We'll define and mandate the guidelines for your operations, set up your advisory commission, and prescribe its membership, duties, authority, and responsibilities; we'll prescribe eligibility criteria for receiving Federal funds, and, in the absence of credible need assessments and justified priority statements, we'll tell you how and on what to spend specified percentages of those monies, and we might even tell you how many hours in a week to do certain things in schools; but we can't tell you how to make educational change happen, nor will we give you the money to make it happen. However, it's got to happen! But please don't ask us to deal with that loaded issue of consolidating intermediate units. Oh, yes, and by the way, PACE Centers, we are going to cut off your head in 1971."

"Not I," said the State Board. "We're interested in the problem and we appreciate the need for new capabilities and resources, but we are having trouble with the Legislature; we can't even get our own State Department of Education reorganized, let alone the intermediate units. Politically speaking, significant reorganization of these agencies and further consolidation and unification of school districts aren't the 'in thing' with this administration. We'll listen to your advisory commission, and we'll welcome all the money you can get from Washington, but we want you to expend most of those resources in the big cities and especially on reading improvement; but we can't do the things you ask."

"Not I," said the State Department of Education. "We're not yet staffed to do the job. Actually, we'd like to get a much bigger share of the State's Title III money to use for administrative purposes so we can create a new section and three new bureaus and increase our professional staff from what was three people up to thirty-three. Now you may think that's a lot, but we ought to provide the professional leadership for the educational development that takes place in the State--and how can you do that without additional staff. Some people say that we ought to be organized differently in order to do the job, but we've been hearing that for years. However, maybe we'll make a few adjustments here and there. But who wants to try to use 'modern management methods' in a department of education! Well, maybe some legislators would like to see it happen; they sure gave us a scare by by-passing us in the first draft of AB 1865, but it's OK now. Anyway, county offices aren't equipped to do the job you're talking about, and Title III money is too limited to spend much on PACE Centers. Besides, creating another layer of administration is inefficient and confusing, particularly when they try to operate outside of our established system! So if you give us the money, we'll manage the job no matter what the districts say."

"Not I," said the universities and colleges. "We've got other fish to fry. We'll do research and publish it so you can see it if you want to dig it out and try to apply it, and we'll consider the results of research efforts conducted elsewhere. We'll provide a home for research and development centers, and we'll help staff the regional laboratories. We'll even help turn out teachers in spite of what the Fisher Act and the State Board and the Governor are doing to us; but don't look to us for that kind of work with practitioners!"

"Not I," said the regional laboratories. "We're not staffed or chartered to do all that needs assessment bit, and we can't afford the time to work with enough districts to catalyze educational development on a broad front. Moreover, we're oriented primarily toward new product and process development and testing plus some demonstration and training. So we've got to pick and choose our client relationships very carefully. Besides that, the product line of any one lab is very narrow, and we're scattered so thinly across the country that we can't be of much direct help except to a few laboratory or experimental schools. But we appreciate what you're up against and would like to help design the strategy for change. We'll send information to anyone who wants it and work closely with those PACE Centers interested in trying out what we've developed--if they can wait until it's ready--but we've got only a piece of the action you describe."

"Not I," said the Offices of County Superintendents. "We'd like to be able to do what you ask; but only about 20 percent of us are equipped to move in that direction, and virtually none of us now have the staff resources to pull it off." A few said, "We're going to try to do it anyway; you're talking 'coordination' and, by law, that's our thing. We know some people in the right places in Sacramento, so we're going to control it; and besides, what you've mentioned makes good electioneering material."

"Are you out of your mind," cried the school districts, "we're the ones who need the help!" "Send money," said many; "we're overworked, understaffed, underpaid, unappreciated, and also overmandated." A few said, "We don't understand all that fancy language, but 'interdependence' sounds like Socialism; and anyway, all that Federal money means Federal control, and there goes all our local autonomy." Most said, "We're trying to do the best job we can to educate our kids, but we're overwhelmed with problems, and every 'expert' has his own pet solution; how can we make sense out of all the stuff that's coming out? University people are sometimes in and out, but we can't understand most of them anyway; the State Department's too far away, and it's losing some of its best people; and most of the county offices are too weak to give us the kind of help you're talking about. We'd like to share in the things you want to do, but don't expect us to do them."

"Then I will, if you'll all pitch in and help," said the Little PACE Centers. And by golly, all things considered, many of them did a creditable job.

This brings us to the central focus of our study: Are the PACE Centers in California worth keeping? If not, why not? And, if so, why--to carry out what mission and functions--and how should they be organized, operated, and related to other agencies in order to be of greatest benefit to education in California? The next chapter deals with these broad questions in a rather detailed fashion.

IV. THE EVALUATION OF THE TITLE III REGIONAL PACE CENTERS IN CALIFORNIA

Chapters II and III, plus the backup material in Appendices B and D, described (a) the basic purposes of ESEA Title III, (b) the overall context in which it operates as one instrument in the educational development and change process, (c) some conclusions from the early study and observation of Title III in action, (d) the relationships among basic elements of California's education system as they interact and are involved in the pursuit of quality education for all, and (e) the potential role of PACE Centers in this statewide process of educational development.

This chapter, backed up by Appendices A, C and E, presents the results of our study of the 21 Regional PACE Centers in California. The first section of the chapter indicates the allocation of funds among ESEA programs to stimulate and support quality education in the State, and briefly describes the purposes and nature of state-level administration of Titles I, II, III, and V in carrying out that general mission. In order to further the understanding of how various factors have affected the nature of Title III projects and the development and operations of the PACE Centers, the second section highlights the developmental history of Title III administration in the State, and offers some related suggestions. The latter sections present the study team's conclusions from our evaluation of the PACE Centers, and respond to specific questions asked of us in the Request for Proposal (see Appendix A) in the context of the mission and functions we recommend for the PACE Centers (see Appendix C) in carrying out their unique role in helping to upgrade the quality of education in California.

A. ESEA IN CALIFORNIA: A BRIEF REVIEW[1]

Based on the 1967-68 allocations to California to support the various titles of the Elementary and Secondary Education Act of 1965, the State will receive approximately $115 million in 1968-1969 for the support of six major programs financed by the Act. Table I identifies the seven titles of the Act and shows California's estimated authorization for each in 1968-69.

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1. Material presented in this section is based largely on the Legislative Analyst's discussion of Item 79 of the Budget Bill (pp. 194-216) as published in the Report of the Legislative Analyst to the Joint Legislative Budget Committee: Analysis of the Budget Bill of the State of California, Fiscal Year July 1, 1968, to June 30, 1969. Quotations not otherwise identified are from that Report.

Table I--Elementary and Secondary Education Act of 1965

Program	California's 1968-69 allocation (millions)
Title I--Aid to Children of Low-Income Families	
School district programs (includes programs for delinquent and neglected youth in local institutions	$ 77.99
Children of migratory farm workers	6.15
Handicapped children in state schools and hospitals	.88
Delinquent youth in state institutions	.89
Subtotal	$ 85.91
Title II--School Library Resources	9.33
Title III--Supplementary Educational Centers and Services	16.30
Title IV--Educational Research and Training	-----
Title V--Strengthening State Departments of Education	1.90
Title VI--Education of Handicapped Children	1.20
Title VII--Bilingual Education Programs	-----
Total	$114.64

1. Title I

The purpose of Title I is to improve the educational opportunities of educationally disadvantaged children in poverty. Title I funds are used to supplement the regular school program through reductions in the ratio of pupils to teachers, the establishment of special reading programs, improved guidance and counseling services, and other means. The objective of the program is to improve the motivation and achievement levels of disadvantaged pupils so that they will complete their public school education and become productive members of society.

The Office of Compensatory Education was established in the Department by the McAteer Act (Education Code Sections 553 and 6466) to administer Title I and other related State programs. A State Advisory Compensatory Education Commission was also established to advise the State Board and the Director of the Office.

"The Title I program is the only program administered by the State Department of Education for which an annual evaluation is performed and a comprehensive report issued." The latest such report indicates that recently greater emphasis has been placed on curriculum programs which attempt "to raise achievement in the subject skills areas of reading and basic communications." Reduced emphasis was placed on cultural enrichment, auxiliary services and reduction of teacher load. The achievement rate of pupils in Title I projects is said to have increased in

1966-67, as measured by objective achievement tests. "The greatest progress in achievement was observed in districts which maintained comprehensive programs concentrating on a few selective objectives." Problem areas were noted (a) in the lack of qualified personnel, and (b) in the need for inservice training for instructors of disadvantaged children.

Those two findings are relevant to this study of Title III, as are the two observations below, reported (along with 10 others) in the 1967 study (Project SEAR) of the impact of compensatory education programs on neighborhood problems.

- There has been a breakdown in school-community relations. School boards do not effectively transmit local needs to the schools or the results to the people...
- Improved evaluative instruments are needed to measure student progress in compensatory education programs.

In the Office of Compensatory Education there is a Bureau of Community Services, which has three primary responsibilities. These three responsibilities explicitly coincide with three very similar thrusts of ESEA Title III. These responsibilities are as follows:

1. "It must insure that local school districts which develop Title I compensatory education proposals provide services for disadvantaged children in private schools as well as public school pupils.
2. It attempts to insure that local Federal education programs are coordinated with community action programs approved under the Economic Opportunity Act of 1964; and
3. It encourages community involvement in local programs, which appears to be a key factor in the success or failure of local efforts."

In addition, the Office of Compensatory Education also contains an Administrative Unit, a Bureau of Preschool Programs, a Bureau of Program Development, a Bureau of Program Evaluation, and a Bureau of Administration and Finance. The functions represented in the Bureaus of Program Development and Program Evaluation are quite similar in nature, if not in application to target populations, to those contained in the unit responsible for administering Title III.

The 1968-69 budget for administration of the Office of Compensatory Education is $1,569,405, of which $1,307,875 is Federal support for ESEA Title I. The Office also administers the Unruh Preschool Program, the McAteer Act Teacher Training Projects, and Chapter 106, 1966 Statutes.

2. Title II

"The objective of Title II is to strengthen the library resources of school districts by providing Federal support to districts for the purchase of library materials and audiovisual equipment... the administration of the program in California is governed by a state plan... (which) requires that not less than 75 percent of the districts' entitlements be spent for books and other materials nor more than 25 percent be expended for audiovisual equipment..." The evidence indicates that Title II is assisting school districts to strengthen their school libraries.

In California the Title II program is administered by the Bureaus of National Defense Education and Audio-Visual and School Library Education. Federal support for the state-level administration of the Title II program is proposed at $343,280 in 1968-69.

3. Title III

The objectives of ESEA Title III (as described in the PACE Manual) are as follows:

> "The Title III program of the Elementary and Secondary Education Act, called PACE (Projects to Advance Creativity in Education), is designed to encourage school districts to develop imaginative solutions to educational problems; to more effectively utilize research findings; and to create, design, and make intelligent use of supplementary centers and services. Primary objectives are to translate the latest knowledge about teaching and learning into widespread educational practice and to create an awareness of new programs and services of high quality that can be incorporated in school programs. Therefore, PACE seeks to (1) encourage the development of innovations, (2) demonstrate worthwhile innovations in educational practice through exemplary programs, and (3) supplement existing programs and facilities. The heart of the PACE program is in these provisions for bringing a creative force to the improvement of schools and for demonstrating that better practices can be applied. Since the innovative and exemplary programs supported by PACE are intended to contribute substantially to educational improvement, priority in funding is given to those projects which offer the greatest promise of solving persistent problems, thereby advancing educational excellence."

"In California, Title III funds have been used to support three major activities: (1) regional data processing centers; (2) regional planning activities exemplified by supplementary (PACE) centers; and (3) innovative projects. It is estimated that California will receive a sum of $16.3 million for the program in 1968-69... Table 2 shows the amounts of money which have been either committed or expended since the initiation of the program."

Table 2--ESEA Title III Expenditures, 1965-66 to 1967-68

	Data processing centers	Supplementary centers	Innovative projects	Totals
1965-66	$462,461	$3,126,391	$2,556,745	$6,145,597
1966-67	949,041	2,706,407	7,924,249	11,579,697
1967-68	-------	3,096,910	10,655,874	13,752,794

4. Title V

"Title V ESEA provides 100 percent Federally financed grants to state departments of education for the employment of additional staff and for research projects designed to improve instructional quality in the public schools. In 1968-69 California will receive approximately $1.9 million under this program, which funding is equal to the current level."

"In California the Title V program is administered by the State Board of Education, which reviews and approves projects submitted by the Department of Education. The state board has an active interest in this title and has allocated the bulk of California's entitlement for research projects in the areas of curriculum development and innovative educational programs." In the amounts budgeted for Title V projects in 1967-68, the largest single item is $260,000 to fund the Program Planning Unit (in the Department's Division of Instruction), the professional staff group primarily responsible for the administration and coordination of Titles III, IV, and V of ESEA.

"The ultimate objective of the Title V program is to improve the quality of the public schools. Presently it is difficult to assess the impact of the special projects authorized by the state board on overall instructional quality. Despite the fact that this program has been operative for three years, the Department of Education has not yet developed any procedure to evaluate the impact of the program either in terms of improved pupil achievement levels or in terms of the improved usage of curriculum developed by some of the projects..."

5. Discussion

The complementarity (and therefore, the need for coordinated administration) of these several programs in stimulating and supporting the pursuit of improved education is obvious. Equally obvious is the need for systematic evaluation of the differential effects of these programs and of projects supported by them. (This study is one specific response to that need.) However, it is difficult to reconcile the positions taken by the analyst regarding the two programs of Title III and Title V. In the case of Title III, he comments: "Thus far there is only spotty evidence that the program is moving toward (its) objectives in the most efficient manner... This lack of evaluation has been largely due to the fact that until recently Title III was one of only two titles of the Elementary and Secondary Education Act that was not directly administered by the Department of Education but rather was administered by the U. S. Office of Education." If administration by the state agency is the answer to the need for evaluation of various educational programs, then one would expect those programs administered by the state agency to have been evaluated. However, as noted earlier, he takes the state agency to task for its lack of evaluation of Title V, a program which has been administered by the State since its inception.

The analyst clearly believes that the Legislature should set the priorities for Title III projects and control the disposition of such funds by legislative mandate: "We recommend that the Legislature develop policy guidelines for the allocation of Title III funds, similar in concept to the guidelines established by the McAteer Act for Title I, and that the Legislature direct the State Board of Education to include such guidelines in the State Plan for Title III... We believe that the legislative guidelines for the Title I compensatory education program established by the 1965 McAteer Act is one of the major reasons for the success of the Title I program and that similar guidelines for Title III would maximize the effective utilization of Title III funds." However, earlier in the same report, the analyst makes this comment regarding the McAteer Act program: "We do not believe that we can accurately assess the accomplishments of the McAteer Act program at this time inasmuch as we have not yet seen any objective evaluation information which relates an improvement in the achievement levels of disadvantaged pupils to the types of projects financed by the program." And yet, we are given to understand by the analyst that the McAteer Act contains specific guidelines established by the Legislature and also is administered by the State in conformance with those guidelines.

We are most sympathetic to the analyst's desire for more effective evaluation of the effects of various education programs. But the act of assigning program administration responsibility to the state agency will not, in and of itself, produce the desired results. Further, the imposition by legislative mandate of specific, prescriptive guidelines as to how Title III is to be administered and to what purposes various proportions of Title III funds are to be applied, regardless of how well intentioned, in our opinion violates the spirit and intent of Federal legislation and guidelines regarding Title III and inhibits the flexibility and creativity so necessary to the exploitation of the full potential of this title.

Guidelines for the administration of Title III in California should be developed--and periodically modified, as necessary--by the State Title III Advisory Council (now Commission, since the enactment of AB 1865) and approved by the State Board of Education, but only after careful study of how best to stimulate educational reform and support significant educational development and change.

It is critically important that the unique and potentially most valuable thrust of Title III not be diverted and forced into the mold of Title I. The two programs are complementary; but they are not twins. It is equally important that the thrust of Title III not be attenuated by prescriptive fragmentation or by bureaucratization at either the state or intermediate levels.

B. THE EMERGENCE OF TITLE III ADMINISTRATION IN CALIFORNIA

The development and operations of the Regional PACE Centers and the design and quality of Title III project application in California were importantly influenced by the early principles and practices adopted at the state level for the administration of Title III. These principles and practices were the eventual product of the interaction among at least ten events:

1. The publication of the book, Organizing New York State for Educational Change, by Brickell in 1961.
2. The study of NDEA Title III in California which was carried out by Donald W. Johnson and published by the Department of Education in September, 1963, as The Dynamics of Educational Change.
3. A series of "Kitchen Cabinet" meetings among several educational leaders in the state, including, among others, Mitch Brickell, Paul Hanna, "Cec" Hardesty, Robert Jenkins, Don Johnson, Leon Lessinger, Lloyd Morrisett, Ed Redford, Emery Stoops, and Graham Sullivan, to discuss ways of effecting constructive change in education.
4. The publication of Phase I (1964) of the Arthur D. Little, Inc., study for the State Board of Education of the State Department.
5. Graham Sullivan's promotion in the Department from Chief, Bureau of NDEA Administration to Chief, Division of Instruction.

6. Lloyd Morrisett's study of the Division of Instruction.
7. The Sacramento Inn Conference of January, 1965.
8. The passage of the Elementary and Secondary Education Act of 1965.
9. The establishment of various advisory committees for several of the ESEA programs by the State Board of Education and the State Superintendent.
10. The development of recommendations for the initial steps regarding ESEA Title III administration, and their acceptance by the State Board.

The combination of the first six of these events generated considerable ferment in the Division of Instruction. Sullivan was eager to move in improving the organization and operations of the Division, and these six events represented considerable "development capital" for the support of such a move. Johnson's study was well structured, most informative, and, as State Superintendent Max Rafferty pointed out in the "Foreword," "the first of its kind in the professional literature." We had found that Sullivan's Bureau of NDEA administration got very good grades from the State's county and district superintendents, who generally regarded it as a model for administrative practice in the Department. Morrisett's study report focused on the correction of a number of deficiencies identified by Johnson, and it substantially extended our own (1964) recommendations.

A Program Planning and Development unit was conceived and recommended for the Division of Instruction and, pending the implementation of this recommendation, Larry Belanger and Don Johnson served primarily as assistants to Graham Sullivan, focusing primarily on planning and the development of an implementable strategy for effecting desired change in the State's education programs and processes.

At the two-day Sacramento Inn Conference many of the study recommendations and much of the previous planning work was presented and worked over by a variety of participants. This was a serious effort to develop a (sorely needed) consensus among educational leaders in California regarding quality education and how to achieve it. Significant results of the conference, as summed up by H. Thomas James, included the sharing of ideas regarding a number of important problems confronting education, the manifestation of cooperation and the recognition of functional interdependence among the several agencies represented at the conference, the acceptance of the logic and rationale by which to attack the problems of producing educational change and improvement, and the expressions of commitment and support to educational development by a number of prestigious individuals and influential groups in the State.

With the passage of ESEA 1965, the State Board's first concern was not with Title III, but rather with Titles I and V. In spite of considerable frustration but with excellent legislative and State Board support, the Office of Compensatory Education was set up and won national acclaim for the dispatch with which it began implementing Title I. Title V was seen as the basic resource through which a Bureau of Program Planning and Development might be established within the Division of Instruction, as well as the vehicle for supporting further reorganization and strengthening of the Department. Belanger and Johnson developed the proposal to establish the Bureau of Program Planning and Development and submitted it to the Committee of Seven (the advisory committee to the State Board on Title V). It was approved by the Committee, by the Board, and then by the U. S. Office of Education, which funded it.

Unfortunately, the process of planned change began to unravel at this point because of a series of unplanned events. Arthur D. Little, Inc., had just launched Phase II of the study for the State Board of Education to recommend a reorganization plan for the State Department of Education. As a result, both the Board and the State Superintendent were understandably reluctant to make significant changes in Departmental organization and staffing until the year-long study was completed. To make matters worse, shortly after the Arthur D. Little study was launched, Graham Sullivan announced his decision to accept the position of Deputy Commissioner of Education in the USOE. The principal avenue of effective Departmental communication with the Board and most of the top level Departmental commitment to significant organizational change and improvement went out the door when Sullivan left for Washington.

A Program Planning and Development unit was established and funded through a Title V project and the three persons selected as staff for this unit were made responsible for state level administration of Title III, Title V, and a Spanish instruction research project. The Title III Coordinator submitted a memorandum to the State Board's Federal Aid Committee in 1965, recommending the basic format for establishing Title III programs in California. The memorandum was accepted and it provided for: (1) preparation by the Department of a State Plan for Title III; (2) priority to be given to the Title III planning (PACE) centers serving 100,000 to 300,000 students; (3) use of the NDEA Title III model in reviewing proposals for ESEA Title III projects; (4) coordination of Title III expenditures with those of the County School Service Fund; and (5) obtaining rulings on certification requirements for using musicians and artists in activities funded under Title III.

County superintendents were informed of the decisions of the Board and applications for the establishment of PACE Centers were submitted at the first deadline, November 10, 1965. The review process adopted by the Title III Coordinator and his reviewers was recommended to and adopted by the U. S. Office of Education.

Three advisory groups have been established at the state level prior to the Advisory Council, recently required by Congressional amendment. The three advisory groups were as follows: (1) the Departmental Task Force on ESEA; (2) an advisory committee appointed by the Superintendent of Public Instruction which met twice and submitted a report to the

Superintendent in June, 1965; (3) an advisory committee appointed by the Superintendent during the 1966-67 school year, which developed the State Plan for Title III adopted by the State Board.

The basic recommendation of the Task Force was that steps be taken to reduce the number of applications which would be submitted under Title III, and it suggested four alternative methods of doing so. The first advisory committee appointed by the Superintendent recommended the establishment of twenty regional supplementary education (PACE) centers. The number was based on estimates of the number of students which could be served by an individual center, giving special consideration to the needs of particularly large school districts.

The second advisory committee appointed by the Superintendent spent the latter part of the 1966-67 school year (32 hours of meetings on four different occasions) developing the draft of the State Plan adopted in June, 1967. Several disagreements developed in the course of these meetings:

1. A difference of opinion between the Advisory Committee and members of the State Board as to the meaning of the word "equitable" in the legislation. The State Board was opposed to the concept of regional allocations, presumably feeling that this was a "sell-out" to the idea of "a little something for everyone."
2. An unwillingness on the part of some county superintendents to admit district administrators into a full partnership in the planning for the use of Title III funds. The position of the county superintendents was that the job which the PACE Centers were doing was coordination, which by law was their responsibility, which to them meant that the Centers should be under their direct authority.
3. Disagreements as to the extent of the power and authority of the boards of the PACE Centers.
4. Lack of agreement on that part of the strategy of Title III implementation which stressed regionalization, multicounty Centers, and multidistrict projects. The split, of course, was on the value loaded or philosophical issue concerning the traditional concept of local independence and autonomy vs. the need for more effective pooling, sharing and utilization of scarce resources and the emerging stress on interdependence.
5. The difficulty of differentiating between "invention" (developments de novo) and the packaging, adaptation and implementation of elements of existing programs, i.e., "adoption."

Possibly because of the lack of the right kind of organization and location of leadership, ESEA Title III made little impact on the Department of Education as a whole, and vice versa. It was not particularly supportive of Title III, and became involved only when Departmental consultants were asked to read and review project applications. For the most part, as might be expected, specialists in various subject areas tended to be partial to those project proposals which focused on their particular area. Differences were precipitated with compensatory education staff regarding which administrative unit should determine how Title III monies should be spent in the large urban districts.

A bright spot in the state level administration of Title III has been the working relationship with John Thorslev, the Contract Officer in the Regional Office of the USOE. He is cooperative, perspicacious, and well respected, not only within the Department, but by a number of PACE Center directors as well. Other relationships with the Regional Office have been less felicitous.

The track record of state level Title III administration shows both signal successes as well as disappointing failures and lost opportunities. California got off the ground fast with its Title III project applications (the first deadline was November 10, 1965), including those for PACE Centers. By January, 1966, California got more proposals approved (29 of 75 submitted) than any other state (the closest was New York with 18 of 100 submitted). This tribute to the quality of proposals submitted was reflected also in the fact that California received more Title III dollars than any other state ($2,587,000 vs. New York's $2,135,000). Other successes were primarily conceptual in nature and provided for the laying of a good foundation for regional planning.

California's concept of needs assessment and priority setting was incorporated in the recent Congressional amendments which transferred the administration of Title III to the states. The scheme adopted for the use of review panels (for the evaluation of project proposals) also was excellent, and included a training session at the beginning of the review period to insure that reviewers were using similary calibrated criteria. The Title III Coordinator was helpful in promoting and planning the project to Prepare Educational Planners (Operation PEP). This project, to be only slightly facetious, was designed to teach 100 administrators (per program of 20 calendar days) how to plan by planning how to do planning. It originally focused importantly on training staff for PACE Centers. It employed systematic planning procedures and systems analysis techniques in teaching the participants how to use them and also PERT, program budgeting, and cost/benefit analysis. This project, planned in the Tulare County Superintendent's Office, has probably had as much effect as any single event in "opening up" and enabling school systems to systematically plan for significant educational development and change.

State level influence on PACE Centers has had both positive and negative impact. The Title III Coordinator and his staff were influential in establishing a set of new regional groupings of local educational agencies. This was accomplished in spite of resistance from a few district superintendents and a number of county superintendents. Much of the resulting political flak was aimed at the Coordinator.

Although many of the original boards of PACE Centers were dominated by county superintendents, the advisory committees set up early within the Center structures were a shot in the arm to the development of dialogue about educational development among significant new segments of the communities.

The Coordinator, a tough minded, hyper-rational conceptualizer and planner was thoroughly respected for his professional competence and dedication by most of the PACE Center directors, a number of the more professionally oriented county superintendents, and his colleagues in the USOE. Therefore, relationships in the field, principally with school districts and the Centers, were generally effective and productive in spite of occasional abrasions. The significant, positive products of these joint planning efforts were: (a) an operational concept for systematically attacking the problem of educational development and change; (b) the development and acceptance of a highly technical and functional vocabulary relating to the change process; and (c) the establishment of a network of PACE Centers intended to match regional planning capabilities with state level planning coordination in carrying out an overall strategy for more effectively meeting the educational needs of students.

The basic failures were largely due to problems--political, interpersonal, and organizational--within the Department of Education, between the Department and the State Board, and with a few county and district superintendents. As a result of these problems and confusions, the potential advantages of applying modern management techniques to the planning and administration of exciting programs such as those of Title III, were never realized. Strained relations between the State Board and the Superintendent during the first three years of the program, the dislocations precipitated by Graham Sullivan's departure, pervasive "divisionalitis" and resistance to change within the Department, and the shift of power occasioned by recent political events and processes foreclosed the possibility of effectively implementing and exploiting the conceptual gains and operational strategies which had been painstakingly developed.

The future for state level administration of Title III is clouded and--if the spate of Title III-related bills in the last session is any indication--legislative lightning may strike. Assembly Bills 1865, 1624, and 1280, as originally drafted, have been interpreted, at least by some, as a vote of no confidence in the state education agency.

What, then, is required if the principal thrust of Title III, to be the "cutting edge" of educational reform--and as was beautifully phrased in Article 1, General Provisions, of Assembly Bills 1624 and 1865 (see quotation on the first page of Chapter III)--is to be maintained in California?

First of all, there is a need for leadership. Leaders of the educational development and change process must have vision; they must see beyond the "now" to the "what might be." They must be infected with creative discontent, committed to the view that something better exists somewhere and must be found or invented. They must be able to inspire similar commitment in others since the effective and systematic implementation of change is a shared or social process. They must be strong and resilient. The battlefield of change is no place for the timid. And, since experiments often fail, they must be open enough to learn from failure, gutsy enough to keep trying, and wise enough to learn from others' failures. Finally, they must have a plan, one strategic enough to encompass all relevant factors, dynamic enough to cope with probable obstacles, and tactically sound enough to utilize scarce resources efficiently.

Second, there is a requirement for tools to increase the leverage of leadership. An information system is necessary at the state level, and it must also be designed to serve the information needs of educational leaders and change agents throughout the State. It must reflect educational conditions and outcomes all over the State thus (a) enabling appropriate allocations of Federal and state resources to meet an accurately identified hierarchy of educational needs, and (b) establishing a baseline from which to compare the relative effectiveness of newly adopted programs or different applications of resources. This will facilitate identification of those new educational approaches that really work and enable educators to make better informed decisions. It also will facilitate regular and meaningful reports by the state agency regarding its stewardship of California education.

We strongly endorse the recommendation of the State Committee on Public Education[2] for the creation of a permanent system for educational inquiry to inform the profession, legislators and other decision-makers, and the public about the status of the schools.

The information system must provide for the collection of data on what is working for whom, how well and under what conditions, and at what cost. It must also contain information regarding resource persons; who has done what and where are they. In order to maintain its value such information must be regularly updated. It also must be connected with other information networks such as ERIC (Educational Research Information Centers). And, of course, this data bank must be usable. Retrieval and analysis of stored data must be easily available to those with legitimate information needs.

The state level information system must be designed to serve the information needs of a number of "clients:" Legislature, State Board, the Department and its several divisions and programs, intermediate units, PACE Centers, regional educational laboratories, and school districts.

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[2] Citizens for the 21st Century: Long-Range Considerations for California Elementary and Secondary Education; Report from SCPE to the State Board of Education, June, 1967.

It should provide management information necessary for long-range planning and forecasting, simulation, program planning and budgeting, personnel administration, monitoring project inputs and costs against the planned schedule of achievements and output, inventory control, identifying future availability of personnel and desired skills, and other related applications.

Inherent in much of the above discussion of what is needed at the state level is the requirement for more effective evaluation processes and techniques. Feedback is essential to learning, to diagnosis, to planning, and to discriminative decision making, and the term "feedback" is but a shorthand expression of sensing and evaluating. Evaluation is a key element in research, in the formulation of judgments and comparisons, and in defining and setting priorities. The literature is replete with criticisms of the sensing, measuring, evaluating, and reporting functions in education. As was evident in the discussion earlier in this chapter of the Legislative Analyst's criticism of the lack of appropriate evaluation, legislators will not be content with descriptions in dollar terms of what constitutes abstract "needs" in education. The section in the report of the State Committee on Public Education[3] which discusses the recommendation for an educational inquiry system deals at some length with the need for more effective evaluation processes and techniques.

The state education agency must insure that evaluations are: (a) carefully planned and coordinated, (b) conducted with maximum objectivity, and (c) designed in valid ways to produce meaningful information. The Title III administrative unit has a special need for evaluation competence, but then so do other major program planners and coordinators, and administrators in the various offices and divisions of the Department. In our study[4] of Departmental reorganization, we felt so strongly about the need for improved evaluation capacities in the Department and for the more effective use of evaluation, that we recommended: (a) the establishment of a new position on the Superintendent's staff, that of Assistant Superintendent for Departmental Program Evaluation, and (b) the establishment of competently staffed evaluation groups in one bureau of each operating division. The state agency, hopefully in cooperation with resource persons and agencies outside the Department, must do more to satisfy critical needs for improved evaluative tools, processes, and results. Otherwise, the legislative lightning referred to earlier may strike here too.

The future of state level Title III administration will depend not only on the factors discussed to this point, but also on the effectiveness of the newly chartered (by AB 1865) State Educational

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[3] Ibid.

[4] A New Organizational System for State-Level Educational Administration: A Recommended Response to Emerging Requirements for Change in California, Arthur D. Little, Inc., 1967.

Innovation Advisory Commission for Title III, the nature of its State Plan, the quality of its relationships with the State Board and with the Department, its credibility to the Legislature, the degree to which the Legislature statutorily mandates the allocation of Title III monies, the nature of the staff office the State Board may now establish to compile and disseminate information "important to general education," the caliber of staff selected to fill approved positions in and the organizational location of the administrative unit for Title III in the Department, and the number, charter, and quality of the PACE Centers, if any, this unit eventually will coordinate.

Most of these factors are impossible to assay at this time. However, if highly competent professionals can be found and hired and given the proper leadership, and if the Title III administrative unit can be located outside the structure of any one division so as to facilitate Department-wide interaction and coordination, it may be possible to establish another organization with the esprit de corps and vitality of the Office of Compensatory Education (which, unfortunately, and for the sake of expediency, was organized and operated virtually "outside" the Department). But if provisions are not made for Title III staff interaction at least with the Title I people and the Special Education people concerned with ESEA Title VI, that would be most unfortunate--especially in light of the three programs' complementary missions, their interdependence with each other and with various agencies outside the Department, and their following common functional requirements: needs assessment, program planning and development, community involvement, program and project evaluation, dissemination of information, program budgeting and control, and the reporting of program effectiveness.

The next three sections of this chapter address our conclusions regarding (a) the appropriate mission of the PACE Centers, (b) the client-related functional requirements of PACE Centers in carrying out this mission, and (c) the organizational maintenance functions required if PACE Centers are to mobilize and apply resources in ways which will enable them to fulfill their mission and effectively serve their clientele. Specific questions from the Request for Proposal (see Appendix A) are quoted and answered where they are relevant in the text.

C. RECOMMENDED MISSION OF CALIFORNIA'S PACE CENTERS

To all individuals, institutions, and agencies interested in California's ESEA Title III Regional Supplementary Educational (PACE) Centers, we recommend the following mission statement: THE MISSION OF REGIONAL PACE CENTERS IS TO STIMULATE, AND ASSIST IN PLANNING FOR AND IN THE DIFFUSION OF, SIGNIFICANT CHANGE IN EDUCATIONAL PRACTICE WHICH IS RESPONSIVE TO IMPORTANT STUDENT NEEDS. Rationales related to key words in this mission statement are given below.

REGIONAL PACE Centers--We have concluded from our analyses that the basic concept of regionalism on which most PACE Centers were founded is valid. The principles of interdependence and role differentiation among various agencies concerned with developing and improving the quality of education are sound and their application should be further extended. Meaningful involvement of various sectors of the community and the coordinated use of combined resources to solve important common problems have produced positive results. However, substantial potential benefit from further use of this approach to educational development still remains unrealized. The continued funding of a modified network of PACE Centers is one of the best possible ways of serving educational development in the State in line with the spirit and intent of ESEA Title III.

STIMULATE change--The idea of setting up agencies to "feed back" various stimuli and information (e.g., needs assessments, results of new educational developments tested elsewhere) to the education system "from the outside in" is basically sound and should be carefully implemented. Steps must be taken to insure that these agencies are not coopted by the operations-oriented elements of the educational "establishment." At the same time, effective linkages and working relationships must be maintained with representatives of the establishment and with other institutions and agencies important to the education system. The source of much of the "stimulation" to local districts, intermediate units, and the state education agency should be the lay community. PACE Centers should perform a "consulting" linkage function here by helping to rationalize and transmit this stimulation. Much of the success to date of Title III and of PACE Centers in particular has been in stimulating awareness of need for educational development and in precipitating fruitful dialogues regarding that need among previously uninvolved segments of the community. The product of increased awareness of needs for improved education in certain areas and of the community's quest for something better in those areas is a climate which supports the *adaptation* and *adoption* of new educational developments, the steps in the diffusion process which "really count."

ASSIST in planning--PACE Centers function in a "change agent" role: collecting, interpreting, focusing, and transmitting stimuli and information. They provide consulting assistance to local education agencies in their planning; and they encourage and facilitate the use of research results, the resources of various programs and funding agencies, and the skills of resource persons within and outside the schools and the district. While the PACE Centers' principal clients are the districts and the focus of the planning is the learner and his development, Centers assist other institutions in contributing to the districts' planning and educational development process. PACE Centers act as "staff" units and *supplementary* planning and problem-solving resources, not as units in the "line" operation of the public school system. They must not take over and "do to" or "do for" the schools. The commitment to and responsibility for constructive action within the schools to improve students' learning must reside importantly in the local districts.

PLANNING for change--The term "planning" is used here in the broadest generic sense. It encompasses (a) evaluation--where are we now, how are we doing, what do we want to achieve, what can we do or use to best achieve what we want, how well did we do, and so forth; (b) communication--inquiring, translating and interpreting, and transmitting; (c) rationalization--development of strategies, tactics and contingency possibilities relating to the definition of objectives and their pursuit through intelligent application of available resources; and (d) coordination--facilitating appreciation and use of resources most appropriate for meeting specific needs.

DIFFUSION--In our opinion, of all the stages in the educational change process, the general stage of diffusion (includes demonstration, evaluation, dissemination, adaptation, and adoption) is least well managed. The capital represented by tested and available educational developments is inadequately exploited. The time lag between the validation of new educational developments and their widespread use is an indictment of the education system. In the traditional organization of the system, no one has the ball and the necessary capabilities to carry it to the goal line. ESEA Title III is uniquely appropriate to deal with this time lag and PACE Centers, properly organized and constituted, are uniquely positioned to fill the functional gap. However, the final step in the process, that of adoption, is the responsibility of the local district board. The intermediate units in many instances may have more direct influence, either positive or negative, than PACE Centers on this final step. It is therefore important for PACE Centers to involve the intermediate units and the local boards in this diffusion process as early and as meaningfully as possible.

SIGNIFICANT CHANGE--The principle thrust of Title III should be to encourage significant constructive change in educational practice. The unique value of the title will be lost and its thrust blunted if it is permitted to underwrite "tune ups" and tack ons," and if the "a little something for everyone" principle is applied to its administration. The "innovativeness" of a proposed project should be secondary to its "exemplariness" as an effort to produce significant positive change in the quality of education. PACE Centers should assist client districts in defining the steps necessary to produce quality education, and in planning for the systematic implementation of all required changes.

EDUCATIONAL PRACTICE RESPONSIVE TO IMPORTANT STUDENT NEEDS--The changes sought are in those public and private school programs, processes, and services which actually affect student learning and development and in those areas where improvement is most needed. This requires: (a) a sensitivity to the emergence of student needs, (b) a method of calibrating the importance of identified student needs, (c) a process for determining which needs should be addressed, (d) a willingness to accept the psychic and financial costs of making significant changes in the quality of current educational practices, and (e) the capacity to produce the degree and kind of changes which will constructively affect the behavior of the learner.

We purposely have defined the primary mission of the PACE Centers to facilitate significant educational development in school districts, since the plans and decisions made there have the most direct impact on learners. However, the PACE Centers also have an ancillary mission of importance to carry out. And that is to develop and disseminate information (primarily needs assessment and evaluation data) to other agencies for their use in planning, priority setting, and evaluation. Such information is of particular importance to the State Board of Education in fulfilling its mission and carrying out the seven major functions described at the beginning of Chapter III. Such information, as compiled and analyzed by the Department of Education in conjunction with other data, is basic to the State Board's annual reporting on the status of education in California, a matter of great interest to the Legislature.

This ancillary mission of the PACE Centers is also important to other agencies and institutions. Information from needs assessments and evaluations of effects of various solutions to educational problems is valuable to other PACE Centers, intermediate units, regional educational laboratories, educational research and development centers, and, of course, to the U. S. Office of Education.

In summarizing this discussion, it should be emphasized that the role of PACE Centers is a "catalytic" one. They represent strategically placed resources which should operate to enhance communication and interaction among other elements of the education system in capitalizing upon all available resources for the purpose of systematically improving the quality of education. They should serve to reduce the often noted fragmentation of educational leadership and to increase the cohesiveness of the State's educational system.

In order to fulfill the mission(s) described above, PACE Centers must carry out certain functions. The next section describes in some detail the set of functions which, ideally, PACE Centers should carry out for the benefit of their principal clientele, the school districts.

D. THE CLIENT-ORIENTED FUNCTIONS OF PACE CENTERS

Conclusions regarding the proper mission of PACE Centers and the functions they should carry out were arrived at through a process described in Appendix A. Among the several client-oriented functions defined below (see Appendix C for a less interrupted presentation) are questions we were asked to answer about the PACE Centers in the Request for Proposal. (Appendix A also contains that list of questions.) Those questions are inserted at points where they are relevant to particular functions prescribed for the PACE Centers. Our answers to those questions comprise the main text of this section as organized within the framework of the following eight major client-oriented functions:

1. Inform constituents of the purpose of ESEA Title III, the mission of the PACE Center, and the range of services available from PACE Center staff and ad hoc consultants
    a. continuously appraise constituents' understanding of this information, and take appropriate steps to correct any discovered misunderstanding
2. Provide for the assessment of educational needs in the area served by the PACE CENTER
    a. significantly involve representative elements of the community in this assessment
    b. identify important problems and opportunities, i.e., characterize discrepancies between what is and what ought to be with regard to the educational, social, and cultural development of learners in the area

QUESTION--A. 1.3(c) What evidence supports or denies the effectiveness of these planning centers in terms of: the process by which needs have been identified and involved in the center(s) activities?

The needs assessment procedures carried out by most PACE Centers were rough and ready surveys and a series of conferences and meetings. Of the several major PACE Center functions, the function of needs assessment and analysis is least well executed. As is apparent on page 2 of Appendix E, different modes of needs assessment were used by the vast majority of PACE Centers. Meetings, questionnaires, and interviews were the methods most frequently used. Research/evaluation studies were used by 13 PACE Centers and student performance analyses were used by two. In our examination of these needs assessments, we rated only four (20 percent of the total) as satisfactory. The two most exemplary were those of Santa Clara (designed and carried out "in-house" by a very competent research man who capitalized on research assistants and equipment from a neighboring college) and Monterey (designed and carried out by an outside research organization, HumRRO, at the nearby Army base).

Most of the needs assessment procedures provided some rough indication (usually ratings of rank order) of relative intensity of needs (among various areas of identified needs); but, typically, needs assessment procedures stopped there. Further analyses to specify differential characteristics of those individuals manifesting needs were not carried out, nor were serious investigations made to determine the probable etiology or cause of an identified need. Both these extra developments could be useful in the process of searching for potential solutions most closely related to identified problems, intensities, and causal factors.

In spite of the general shortcomings regarding needs assessments and analyses, the process of focusing PACE Center activity upon identified areas of need was generally satisfactory. Of the 21 Centers, 19 focused their objectives on the resolution of identified needs. However, of those 19, two Centers "pushed" for the adoption of a "pet solution" irrespective of the needs assessment justification (this was in addition to responding to legitimate needs). One of those two Centers persuaded a district to submit a project application based on the "solution" being pushed, and the project was approved and funded.

The "social" processes through which so many of the needs assessments were carried out produced some highly valuable results in spite of the lack of research precision. The community discussions, interviews, and feedback of survey information generated more commitment to action in support of educational development than would have been possible without such involvement. Much of the continuing support for and focused effort on educational change by members of the community appears to be related to the depth and extensiveness of dialogues held about student needs, how bad they are, where they are located, who has them, and what to do about them. The review of potential solutions with community representatives provides an opportunity for them to participate in the decision-making process and further cements this support for action. Unfortunately, there is no adequate provision for demonstrating to the Title III funding agency the degree of individual, community, and school support that actually exists for significant change. The provisions made for continuing the project after termination of funding appear to be the only direct piece of evidence in this regard.

Among PACE Center activities, one of the best performed (in terms of providing needed and supplementary help) was that of helping clients determine what might be done about identified needs. Once the need had been identified and addressed by Center staff, the process of planning what might be done about satisfying the need was generally quite sound. PACE Center staff have proved quite helpful to districts in researching the literature, establishing libraries of useful material, identifying potential resource persons and arranging for their involvement, assisting client personnel in planning for the use of community resources in attacking identified problems, and, particularly, in the technical and supportive process of designing and writing project proposals. These kinds of activities require the time and competencies not generally nor sufficiently available in school districts.

As suggested, this particular activity is highly dependent upon the quality of the staff of the PACE Centers. It was the consensus of the study team and of knowledgeable clients of the PACE Centers that probably 80 percent of the PACE Centers were significantly helpful in this regard.

c. define the pattern (location) of needs by degree of intensity of need

QUESTION--A. 2.4 Are the identified needs being met by the project(s) clearly defined?

The question quoted above is actually the first half of a two part question, the latter half of which will be answered later in this section. This question, so closely related to the previous one, must also be answered largely in the negative; but, the situation is improving.

Most of the first Title III project proposals submitted, whether from California or other states, or with or without the help of PACE Centers, suffered from a lack of operationally defined or measurable objectives which were directly related to carefully defined educational needs. Even though the guidelines, particularly those from California's Title III Coordinator, specified that an educational "need" should be defined as a characteristic of a student and not as a characteristic of an institution, early "violations" of that dictum were common. Even so, the early project proposals from California fared better than those from most other states under the scrutiny of the Federal proposal reviewers (29 of the first 75 proposals submitted from California were approved and funded).

We learned that at the state level, the single reason most frequently given for negative recommendations on project proposals was that "the problem which the project was designed to attack was poorly defined." One of the most common comments of state reviewers was: "This is an interesting solution proposed here. The only trouble is, I can't figure out what problem it's a solution for." Most early proposals (and some later ones) discussed a general problem, e.g., dropouts, and then offered a solution which had (only) some face validity plus an emotional appeal because it obviously was trying to help someone. But it would be impossible to tell whether the dropouts the writer desired to help were male or female, black or white, gifted or retarded, rural or urban, or rich or poor. Yet, the applicant apparently believed the same solution would be appropriate for all.

There is also a lingering tendency to identify and define needs by using terms that describe solutions. For example, instead of stating the unemployment rate of post-high school males of a certain age group and depicting other characteristics of the "problem" population group and analyzing the basic reasons for the unemployability of that group, a proposal might simply affirm that "there is a need for extended vocational education programs and guidance services in our high school because the unemployment rate of our recent graduates is 15 percent."

As indicated earlier, this problem is being ameliorated. Some of the nearly 700 persons in California who have benefited, either directly or indirectly, from Operation PEP (the Title III project, Preparing Educational Planners) are now on the staff of PACE Centers; and their training is reflected in the quality of the proposals being written. Project proposals of high quality include but are not limited to: San Diego City's "English as a Second Language" project, the Northern California

"Small High Schools" project, Santa Clara's "Project STRIVE" in vocational education, and a superb and very recent Education Professions Development Act proposal generated with the help of ERA, the PACE Center located in Sacramento.

d. depict the characteristics of those learners who manifest the needs

e. analyze the etiology of needs and identify probable causal factors

f. communicate results of needs assessments to all affected and interested parties

g. assist representative elements of the community in assigning priorities to identified needs

QUESTION--A. 1.2 Is there regional participation in the determination of and in the actual assignment of priorities for activities, including the project of the centers?

Applying a literal interpretation to this question, the answer is unquestionably, "Yes." The geographical dispersion and the number and variety of people participating in the determination of priorities of PACE Center activities is great. Advisory committees to a greater degree and boards of directors to a lesser degree seem to be recruited, in the majority of Center service areas, so as to provide for some regional representation. Page 7 of Appendix E shows the number and variety of positions represented by persons who decide upon PACE Center objectives and priorities. Members of the board of directors and county superintendents (or their delegates) are clearly mostly influential in these decisions. Page 8 shows the variety of positions represented in evaluating the activities of PACE Centers. Page 9 shows that county superintendents and boards of directors have the highest degree of influence in planning and implementing Center activities. Persons representing six other positions also have a "high degree" of influence in such planning and implementation.

Page 20 of Appendix E shows that 59 percent of the school districts in California were involved in the needs assessments carried out by the PACE Centers; 270 districts, slightly over 22 percent, were represented in the formulation of PACE Center goals and objectives; and 403 districts, approximately 33 percent of those in California, were represented in some kind of advisory capacity to the PACE Centers. At least 300 districts, approximately 25 percent of those in the State, have not participated in any active way with the 21 PACE Centers.

However, such statistics can be somewhat misleading. In our interviews in the field we found that really meaningful regional participation in the determination of the more important PACE Center policies and priorities was not so widespread. In fully 50 percent of the Centers the important policy and priority matters were either decided by the county superintendents and/or their key staff (or in the case of the large cities, by city superintendents and/or their key staff) or, such issues became troublesome or got "hung up" because of friction among the county and district superintendents involved. So while there was generally widespread regional participation and involvement in the consideration of such issues, the actual decision making process was either importantly inhibited or rather closely controlled in half of the PACE Centers. One Center recently was closed down because of such difficulties.

This problem is addressed by our recommendations in Chapter I and in Section F of this chapter.

QUESTION--A. 1.3(e) What evidence supports or denies the effectiveness of these planning centers in terms of: the manner in which priorities are determined?

Our analyses indicate that 80 to 85 percent of the PACE Centers have adopted a generally systematic and satisfactory process for determining priority issues on which Center efforts are focused. The efficacy of that process varies widely, however. At least eight or nine of the 21 PACE Centers are now carrying out this priority determination process quite effectively; another eight or nine encounter the sort of difficulties mentioned above in answering the preceding question; and three or four appear to assign priorities according to the judgment of the few administrators in control.

In general, the more systematic and better executed process of priority setting works like this: Local participation of community representatives in needs assessment and planning is achieved through research/evaluation studies, surveys, interviews, and meetings. Results of needs assessments carried out by Center staff are discussed with community groups and advisory committees. Areas of need are identified and agreed upon, and in some cases, steering committees or special advisory committees are established to work on a given area of need with Center staff assistance. The needs are further documented and specific problems associated with a given need are analyzed. Each steering (advisory) committee, together with Center staff, recommends an outline of a plan of action and a level of priority for that action. The Executive Board of the PACE Center, sometimes with help from an advisory committee, acts on the recommendations and establishes priorities among plans to address different needs.

In comparision, the less effective process of priority setting works in the following fashion: There is moderately (but only moderately) good citizen and regional participation in needs assessment processes involving group meetings and/or surveys. Information collected by Center staff in these usually rough and ready needs assessment processes is presented to a Center board of directors who may or may not listen responsively to its advisory committee(s). The board clearly makes the decisions regarding priorities and, in this case, there is often only limited citizen participation. Boards of directors making decisions in this manner usually are heavily loaded with educational administrators; and frequently, at least in multicounty Centers, the heaviest representation is that of county superintendents.

Pages 4, 5, and 6 of Appendix E show the needs addressed and the priorities established among them by the 21 PACE Centers. Remedial reading, improvement of self concept, and especially, job entry skills have been given popular and high priority attention.

Page 7 of Appendix E shows that criteria used to establish priorities among activities and objectives of PACE Centers vary widely among the Centers. In matching Center priorities with others, generally equal, but also widely varying, emphasis is given to nationally established priorities, state priorities, and intensity of needs as determined by each Center. The concerns of the Center boards are consistently given average weight, but the concerns of advisory committees are consistently given low weight in these determinations. Perhaps that is why so few advisory committees remain active, viable, and "dependable."

The relative influence applied in the determination of Center priorities and objectives is consistently highest for boards of directors and county superintendents (and their staff). The more effective Centers appear to have boards of directors which are either highly pluralistic in make-up, or, if dominated by educational administrators, are open to influence.

A number of Centers (at least eleven) have made conscientious efforts to address both national and state priorities in the design of projects at local levels. Center staff already have begun to assist districts in planning and developing projects to address the educational needs of handicapped children, a high national priority. The enunciated priorities for educational development in urban areas are having a significant influence on the project planning of both districts and PACE Centers. Districts whose problems or needs are not congruent with state or national priorities frequently are reluctant to take the time and energy necessary to plan or develop a project when they believe it has little chance for approval and funding.

3. Thoroughly investigate what has been done elsewhere in coping with those kinds of needs (type or area of need, intensity, characteristics of learners, and etiology) assigned high priority by the community
    a. identify approaches (or elements of approaches--methods, tools, philosophies, materials, techniques--in various possible combinations) likely to be most effective in meeting identified and analyzed needs

4. Determine the capabilities and resources needed to effect the adoption of possible "solutions" to high priority needs, involving resource persons and community representatives where appropriate and possible
5. Assist community representatives in assessing and inventorying the nature and extent of capabilities and resources in and available to the community in its efforts to modify and/or adopt possible solutions to meet high priority needs
6. Organize discussions among educators, community leaders and other resource persons to review developed information and plan ways of utilizing available resources in meeting the high priority needs of learners in the most effective manner

QUESTION--A. 1.3(b) What evidence supports or denies the effectiveness of these planning centers in terms of: the involvement of the schools and other community organizations in decision making?

There are several topics that should be addressed in answering this particular question. First of all, there is no question but that the "school community" is the one with which PACE Centers find it easiest to work. Secondly, the involvement of schools or school districts is usually accomplished "from the top down." This means that the district superintendents are usually the first key people involved and that subsequent school system involvement depends largely on the attitude and behavior of those superintendents. If the superintendent is committed to educational development, he will arrange for the engagement of his staff. The third factor is that in a large number of districts (at least 50 percent of those contacted by PACE Centers) effective involvement does not proceed beyond the superintendent. In other words, even though a number of principals or teachers may have been contacted or reached through various brochures or bulletins, widespread involvement of principals and, particularly, teachers in developmental planning, workshops, and inservice training experiences is more uncommon than common.

In those places where effective teacher involvement has taken place, the potential for change seems high, e.g., the countywide Family Life Education project developed by the Contra Costa PACE Center. It may be that one of the messages here is for PACE Centers to focus the bulk of their planning assistance on those districts which are interested in and "open" to constructive change, and to address developmental planning activities in those school systems toward projects which have a legitimate need for inservice training. Teachers must then necessarily become involved, and, hopefully, will participate in project planning and development. Several proposals, some of which are truly exemplary, have recently been written with assistance from PACE Center staff capitalizing on opportunities inherent in the Education Professions Development Act, a marvelous vehicle for the support of inservice training.

Those representatives of the community-other-than-schools generally do not have as much decision-making power in or influence on PACE Centers as do county and, to a lesser degree, district superintendents. This has created problems in stimulating community involvement and obtaining community support for at least seven PACE Centers. This influence bias can result from several factors including: (a) a high proportion of superintendents on the board, (b) their ability to speak from a posture of "expertness," (c) their "leverage" or influence on other members of the school system, and (d) the absence of even a moderately representative "board" in five (now four, since one has changed) PACE Centers.

School districts have participated extensively in contributing to the decision-making process of PACE Centers, but in at least six of the Centers the district representatives have not been admitted to full partnership with those of the counties. But, of course, in the two large city district PACE Centers, the school district administrators (especially in one of the Centers) have been the decision-makers. As indicated earlier, 59 percent of the districts in the State participated in needs assessments; 22 percent participated in the formulation of goals and priorities; and 33 percent were represented on various PACE Center advisory or steering committees. Among the Centers the number of county and district public school people on PACE Center boards varied from four to 20. Fourteen of the 21 Centers have private schools or institutions of higher education represented on their boards. The number of private, parochial, or other (non-K-12) school people on the boards varied from zero to six.

We concluded from our analyses that the depth and extent of community involvement both in the development of the PACE Center and in its ongoing activity is critically important to its long term success in effecting significant change in the quality of education. Deep and extensive involvement is generally more difficult to achieve, of course, in those service areas which are heavily populated. However, the success of the San Diego Center indicates that it can be done. It is also important to insure representativeness in such community involvement and also to insure that the involvement is related to meaningful issues and activity. Board members or advisory committee members who are used for window dressing will resent it. The most dramatic example of the effect of meaningful involvement is the small Hughson Union High School District where the whole life of the town has become centered around the schools.

The three PACE Centers which most rapidly became effective, going concerns afford some interesting contrasts in this respect. One was located in a large, heavily populated area. The initial mobilization for planning was among a number of educators who worked well together and who had prior experience in the use of a high powered advisory committee. This strong, committed nucleus on the board squashed any incipient fractionation or mutinies among superintendents of other participating districts and then moved toward engendering a depth of community involvement. One of the other three Centers had a beautiful climate to start with. The applicant agent was well known, respected, and had established first class working relationships not only with educators but also with other influential people in the county, a number of whom were placed on the board. The Center director was highly competent, he hired a good staff, and he capitalized upon good relationships with the county office. However, the factor most responsible for speed in getting going was the springboard effect of being able to capitalize on a community action group already mobilized to address issues similar to the ones identified through PACE Center efforts as priority problems.

Another quick-starting Center had the benefit of a staff member who had worked on the early formulation of state plans for the administration of Title III in California. This Center staff member was primed, capable and aggressive. The leadership of the new Center capitalized on their access to members of the intellectual community of the area and they organized a powerful board. Unfortunately, the PACE Center service area was not homogeneous in its make-up and the tone of the board and the actions of the Center staff, while appreciated by some constituents, alienated others.

About three-fourths of the PACE Centers make active and at least generally effective efforts to involve lay citizens and representatives of various segments of the community in needs assessment and advisory committees. Tabulated material in Appendix E demonstrates the variety of such involvement. Not reflected in the questionnaire material is the intensity of involvement of individuals in each of these kinds of categories. (We noted instances where names on and the number of testimonial letters, as well as their content, exaggerated the extent of the actual involvement of such agencies and groups in decision making and in project planning and development.) Interview results suggest that only about 40 percent of the PACE Centers make continuing significant use of these people.

It is often difficult, particularly in larger cities, to identify individuals who "truly represent the community." However, some of the most successful PACE Centers are those which have established strong working relationships with the leadership of groups such as community action agencies and other organizations connected with the Office of Economic Opportunity, Model Cities programs, the NAACP, leaders in the Mexican-American communities, and so on. As a general rule, we find that the Centers which appear to be having the greatest impact on educational change are those backed up with strong community support generated by extensive and meaningful citizen involvement.

a. stimulate the development of a climate in the community which will facilitate the study, evaluation, and adoption of those educational changes which will best meet identified needs of the learner

7. Provide for supplying continuing support and necessary technical knowledge to agencies striving to develop innovative and/or exemplary educational programs and projects to test and demonstrate the effectiveness of likely solutions to priority problems

QUESTION--A. 1.3(d) What evidence supports or denies the effectiveness of these planning centers in terms of: the outcomes of center activity as indicated by projects, the recipients of projects, or other specified activities which involve regional clientele?

The early products of PACE Center activities with clients were primarily need assessments and project proposals (grant applications). The proportion of project applications which were approved and funded was low (on the average, about 40 percent of proposals designed and submitted with PACE Center assistance are approved and funded) and therefore disappointing to a number of clients. However, the "track records" of the 21 PACE Centers with regard to project proposal approval varies widely. Some Centers have had as high as 80 percent of their proposals approved (such Centers usually help prepare and submit few proposals). Other Centers have had few proposals approved (one has had all 27 of its proposals disapproved).

The focus of PACE Center activity has shifted significantly in the last year or so. There is a good deal less effort applied to actually writing proposals for clients, and more effort devoted to assisting them in long range planning, in identifying kinds of solutions to educational problems which might be supported by programs other than Title III, and by developing contingency plans for projects submitted for funding (to provide for implementation of some aspects of the project even if it were not approved by the funding agency).

Probably the greatest difference in kind of activities organized by the Centers has been in the number of workshops, seminars, conferences, and other inservice training experiences arranged for teachers and middle level professional staff in school systems. By and large, most of these newer activities and projects have been quite well received. Evaluative feedback is easy to obtain from conference participants and the large majority of such activities have been given good grades. However, the effects of such conferences and workshops on the behavior of the participants when they return to their schools have not been systematically evaluated. Of the school administrators we interviewed whose staff have been involved in such training activities, about 75 percent reported to us, on a subjective basis, that their people had benefited from these sessions at least in some ways and enough that they would appreciate more such involvement.

In fiscal year 1967 the total number of major Title III project proposals approved and funded was 57, of which 16 were planning projects and 41 were operational. The number of students to be involved in or affected by these projects totaled approximately 1,840,000. (This startlingly high figure is obviously the result of some students, benefiting from more than one project, being counted several times.)

Page 21 of Appendix E summarizes information regarding the project proposals prepared using at least some degree of assistance from the PACE Centers. The total number of such proposals prepared since the Title III program was started amounts to 413. Individual PACE Centers varied in the number of proposals they helped prepare from a low of six to a high of 65; the average is 20.

The total dollars represented in these 413 project proposals amount to $83,348,392. The dollar amount of project proposals accepted is $32,547,727, about 40 percent of the amount for all proposals submitted. Of the remainder, a substantial amount is represented in proposals still pending, although many proposals in the "pending" category have been rejected--and some are being rewritten for resubmission.

Page 22 of Appendix E shows the degree to which each PACE Center contributed in the development of each project proposal and the current status of those proposals by Center. Some Centers have indicated the agency responsible for rejecting proposals and some reasons for rejection.

Of the 67 proposals which PACE Centers played the key role in project conceptualization, 33 (50 percent) were approved, 20 were rejected, and 14 are "pending." Of the 99 proposals which PACE Centers participated equally with others in preparing, 32 (about 32 percent) were approved, 50 were rejected, and 14 are "pending." Of the 180 proposals prepared with only ancillary or supportive help from PACE Centers, 53 (about 30 percent) were approved, 92 were rejected, and 35 are "pending."

A number of exciting projects have been launched under the auspices of Title III and with assistance from PACE Centers. For most of these projects it is still too early to be able to report hard data from thorough evaluations of their effects, but some important results are evident even without the use of formal evaluation instruments. We shall briefly describe several projects which we believe demonstrate outstanding promise and at least some evidence of concrete benefits. There are other projects which might also have been included in this list (Enterprise, Los Angeles, etc.), but our intention is merely to illustrate a sample of these better projects.

a. The Individually Prescribed Instruction Project in Monterey County. This project is already having a diffusion effect on school districts other than those conducting the demonstration projects. The individually prescribed instruction materials from the University of Pittsburgh are actually being bootlegged from the demonstration schools. Outside consultants have been used and appreciated. Staff enthusiasm is high. The students, as well as parents, seem impressed, and preliminary evidence from achievement test scores shows some real advantages accruing from the application of this form of individualized instruction. Additionally, and importantly, teachers as well as administrators have become familiar and comfortable with the basic ingredients and the concepts and the vocabulary of a sophisticated educational technology.

b. The Know and Care Project of San Mateo Unified High School District. This Know and Care Center was intended to be an information switching center for any person who came to it asking for help. The center staff is exceptionally able and they do, in fact, care. A number of side effects have made significant changes in the district. Principals have realized that it is possible to have a comprehensive district but not necessarily comprehensive schools. This has led to a high degree of inter-school cooperation for the purpose of providing the kind of program to an individual student which will be most responsive to his needs. First the center and then the schools have developed effective relationships with employers in local business and industry. The project has led to the development of a quality control concept (which insures that students reach given levels of achievement) and also a human potentials laboratory. The project furthers the "Zero-Reject" tradition suggested by the superintendent and adopted by the board.

c. The Learning Activity Package Program in Hughson Union High School District. This is a program aimed at providing individualized continuous progress education for high school students. It is adapted from the Nova Schools in Florida. The unique factor is the way in which a small rural high school district with relatively limited funds mobilized tremendous amounts of community support and staff participation in planning this project and in implementing it. Student attitudes have changed. The use of parent volunteers has engendered even greater community support. The physical plant has been overhauled. Instructional resource centers have been developed and the curriculum has been thoroughly revamped. Interaction with college and university faculty is high and articulation is being improved between the high school and the junior college, particularly with regard to vocational training. The imported techniques are being further diffused within the district and to other districts in the State.

d. English as a Second Language Project of San Diego City. This was the first Title III project in California to be developed "by the book." The project addresses a high priority problem--that of effectively providing education to Mexican-Americans. Extensive involvement was obtained within the County Office, among six school districts, with specialists in bilingual education, using field trips and the assistance of five national experts in the ESL field. The developmental process for the project proposal was first class. The instructional program which was developed from the project is probably not a great deal better than a number of others, but the most dramatic impact of the project is the extensive community participation which was engendered. In the first year of its operation, the summer school enrollment in English instruction for Mexican-American children increased from 9 to over 400. The second year over 1,000 were enrolled in the program and parents were standing in line to be sure that their children would be able to attend. This project is a model for establishing participatory community responsibility for education.

QUESTION--A. 2.3(a) What number and relative percent of districts or agencies participate in projects in the region?

(b) What number and relative percentage of projects are initiated outside the center by these client organizations?

(c) How is this number and percent, in each case, related to the number of students to be served directly, or indirectly by these projects?

In answering part "a" of this question, we must first distinguish among kinds and degrees of district or agency participation, and indicate the range of such participation in the areas served by each of the 21 PACE Centers.

The highest degree of district participation is related to information dissemination. At least (and probably more than) 90 percent of the school districts in the State regularly receive bulletins, newsletters, notices of conferences, etc., from the PACE Center in their area. These information pieces are intended to inform recipients of the nature and location of new educational developments being tried out or demonstrated, the activities in and progress of such projects, and the project effects or results as they are determined. The actual "reach" of these information pieces among the professional staff of school districts is determined as much or more by the district administrators as it is by the PACE Center.

Obviously, the least extent of district participation is in the actual "hosting" of a project. We estimate that no more than 8 to 10 percent of the districts in the State host a project, i.e., actually manage and operate a project in the district. We hasten to add that this is more or less as it should be for the purposes of demonstration, evaluation, and dissemination. However, because of the size and student enrollment of some of the districts hosting projects, the relative proportion of total students in California enrolled in such districts is much higher (approximately 50 percent!).

The principal and unique benefits derived from the regional character of California's system of PACE Centers and the regional emphases of most of the projects designed and funded are manifest in the involvement of district people and agencies outside the district hosting a project. This involvement includes joint needs assessments and project planning (i.e., interdistrict and multicounty participation), use of pooled resources (people and facilities), visitations to the project, and multidistrict participation in seminars, conferences, and workshops emanating from the projects.

Page 20 of Appendix E shows the number of districts involved with each PACE Center in various kinds of involvements. Of the 1,200 or so districts in California, 707 are involved in needs assessment activities, 115 provide facilities for various project or PACE Center activities, 507 were helped in the preparation of project proposals, 445 are involved in various kinds of inservice training or project related conferences many of which include the participation of outside consultants, 506 contributed ideas for study and planning, and 109 contributed the assistance of some of their personnel. The districts represented in these activities and involvements enroll approximately 3,956,000 of California's 4,880,000 pupils.

It was difficult, if not impossible, to determine the answer to part "b" of this question since we could not canvass all districts, and since it was usually difficult to pinpoint the actual genesis of a project. However, our sampling and our interview results suggest that perhaps 50 percent of all project proposals written up in at least outline form (many of which are not finally submitted for approval and funding) are initiated by districts rather than by PACE Centers. However, as indicated earlier, those project proposals which benefited from significant developmental assistance and support from PACE Centers usually had a better chance of approval and funding.

b. assemble an inventory of outside consultants and arrange for such special assistance as needed

c. provide guidance and assistance in writing proposals

    (1) relate learner need(s) addressed by proposed projects to state and national priorities

    (2) assist in "packaging" attributes of various state and Federal programs in multifaceted projects so as to deal comprehensively and most effectively with identified needs, and toward the end that some support may be continued even if others cease

    (3) assist proposing agency in capitalizing on what has been discovered elsewhere

    (4) suggest features of proposal style, format, content and procedures most likely to be favored by proposal reviewers and approval agencies

    (5) encourage and assist in the development of "contingency plans" for the implementation and support of projects in case they may be turned down by the funding agency (agencies) addressed

d. assist proposing agency to insure:

    (1) appropriate involvement of the community in the planning and implementation of the project

QUESTION--A. 1.3(a) What evidence supports or denies the effectiveness of these planning centers in terms of: the community outside of the school districts and the state school system?

We discovered little evidence to suggest that California's PACE Centers, in general, were either having a significant influence on the non-school community or were making broadly significant use of such community resources. There are, of course, several exceptions and in the course of this discussion we shall mention a few of them as examples.

The original Title III emphasis on the involvement of cultural resources broadly representative of the service area in the enrichment of educational experiences of children is petering out. Considerable interest and activity of this sort was generated early in the program, but priorities are being shifted to other areas, project funds are being allocated to other activities, and cultural groups and agencies are losing interest or are being neglected. The use of advisory groups comprised of people from the arts is rapidly declining among Centers.

However, some projects with a primary focus on cultural development were developed and funded; and a few apparently have been successful, e.g., the Educational Theater in Rural Schools project operated out of the Humboldt County Schools Office; and the Educational Laboratory Theater project and the Area Program for Enrichment Exchange (APEX) in Los Angeles City.

Cultural agencies or groups are represented on the boards of only three PACE Centers, and on the advisory committees of 11 Centers; San Francisco has 17 such representatives on its advisory committee(s). Seven PACE Centers currently have reciprocal working relationships with cultural groups or agencies in their areas. Representatives of cultural groups have been involved in the needs assessment activities of nine PACE Centers, in the processes of evaluating the activities of five Centers, in active information dissemination by seven Centers, and are on the mailing list of six Centers.

Business and industry has been involved in a few projects (mostly related to vocational education or work study) and in the affairs of a few PACE Centers. (The ERA PACE Center--Sacramento--organized an exhibit for the California Exposition; the Alameda PACE Center and the Oakland Schools, together with Kaiser Industries and the Neighborhood Youth Corps, developed and launched an apparently quite successful project to familiarize high school students with the world of work during summer vacations; one PACE Center hired a staff man to explicate and encourage the contributions of business and industry to the improvement of education, particularly in the realm of educational technology: the effort failed.) Only about 25 percent of the PACE Centers are making good use of the potential represented by this important sector of our society.

Business and industry is represented on the boards of only two PACE Centers, and on the advisory committees of only seven Centers. Ten of the 21 PACE Centers have established reciprocal working relationships with business and industry. Business and industry representatives have been involved in the needs assessments of five Centers, in the evaluation of the activities of seven Centers, in the information dissemination processes of eight Centers, and are on the mailing list of six Centers.

Several Centers, particularly the ones in Butte, Los Angeles City, Riverside, San Bernardino, and San Francisco, have significantly involved people from institutions of higher education in their activities, especially in consulting or advisory capacities. Some of the college and university consultants used by the Riverside (SPEIR) PACE Center were found to be so effective in working with teachers on science course development and teaching that they have been employed on a part-time basis by counties and districts in the area.

Of the 21 Centers, 16 have advisory committees with at least some representation from institutions of higher education. A few meaningful interactions have been established by PACE Centers with Stanford University faculty, and with the State Colleges at Fullerton and San Jose; heavy use is being made by the Butte Center of faculty and facilities at Chico State College; some similar relationships have been established with Humboldt State College by the Humboldt Center; but, by and large, it would appear that the resources and the potential represented by institutions of higher education are not as thoroughly exploited as they might be by the majority of the PACE Centers.

Social service agencies represent another potential resource not broadly utilized by most PACE Centers. Four Centers have representatives of such agencies on their advisory committees, Contra Costa has a social service agency representative on its board, and the Kern Center has established reciprocal working relationships with 30 such representatives.

Community organizations are much more widely represented and involved in the activities of PACE Centers than all other categories of non-school community resources with the possible exception of colleges and universities. Six PACE Centers have community organization representatives on their boards; Contra Costa has five such representatives on its board. Seventeen PACE Centers have community organization representatives on their advisory committees. Fifteen Centers have established reciprocal working relationships with community organizations in their areas. Thirteen Centers involved such agencies in their needs assessments, and seven Centers used such agencies in evaluating the Center programs and activities. The issue of whether or not community action agencies should be able to exercise a "veto power" over the activities of PACE Centers is still troublesome to a few Centers.

While regional educational laboratory representatives attend the monthly meetings of the PACE Center directors, only a few substantative results have occurred from this interaction. For example, the Southwest Regional Educational Laboratory (SWREL) has carried out "orientation" meetings with a few county offices, districts, and PACE Centers to discuss the purposes and activities of SWREL, and, upon request of the PACE Centers in San Diego, Santa Barbara, and Riverside, organized workshops for development and evaluation training. While the regional laboratories make some effort to keep the PACE Centers informed of their activities and developments, they are not yet offering products in the form of program packages to the Centers and districts for demonstration and diffusion. Most of the regional laboratories probably are one or two years away from that stage of product development.

The working relationships between PACE Centers and regional laboratories, other than that related to a few workshops, are largely still rhetoric (see Chapters II and III). There is a need for the U. S. Office of Education to establish policies and procedures to more effectively define the functional relationships between Titles III and IV, and particularly between PACE Centers and the regional laboratories. These definitions should emphasize the product development and testing mission of the laboratories and capitalize upon the diffusion capabilities of the PACE Centers. Several of the regional laboratories are reluctant to attenuate their product development efforts by moving significantly into the diffusion process. However, since no more than half of the PACE Centers in California have defined their objectives so as to mesh with those of the laboratories, a good deal of joint planning and coordination still remains to be accomplished.

Practically all PACE Centers have made substantial efforts to involve parochial school children in Title III projects and parochial school representatives in program planning. Such efforts have been reasonably successful. Parochial school representatives are on the boards of four Centers, on advisory committees of ten Centers, involved in the needs assessments of seven Centers, involved in the evaluation of Center activities with four Centers, and involved in the information dissemination processes of six PACE Centers.

(2) effective management of the project (including staffing and training)

(3) that provisions are made for appropriate evaluation of the management and the results of the project

QUESTION--A. 1.4 What identifiable changes have occurred in the client service area in terms of attitudes, procedures, and improved instructional or pupil performance programs? To what extent are these changes perceived by these clients as attributable to the program(s) of the center(s)?

In answering this question it is important to make it clear that the "changes" being discussed are those related to the influence of the PACE Centers and not those resulting directly from the projects carried out by county offices and districts. We were not chartered to evaluate the effects of individual projects other than those establishing and funding the PACE Centers. However, we wish to affirm in passing that in following up the efforts of PACE Centers we learned of several projects (and we are sure there were a number of others) which were producing constructive results in terms of student interest and achievement, parental involvement with the schools, and teacher behavior in the classrooms. Throughout the text of this chapter reference is occasionally made to individual projects which were noteworthy in some particular ways. The four projects briefly described in response to Question 1.3(d) should suffice as illustrations of what some of the better projects are producing in the way of changes in the schools.

Probably the most important impact of the PACE Centers is related to the concept of "regionalism" on which most of them are based. Regional PACE Centers stimulate interdistrict and intercounty communication and joint participation in planning. They tend to ameliorate tendencies toward provincialism in participating districts and counties, and they stimulate the broader consideration of how best to use a wider array of potential resources. For example, the Small High Schools Project developed with the assistance of the Butte PACE Center has provided the vehicle for interaction and planning among the administrators and staff of thirty-one high schools in northern California. Individuals we talked to were sure that this communication would never have taken place on this scale without the support of this project. Participants report that such discussions have already resulted in more openness to change as they review their own operations in light of experiences communicated by others. However, the effects on students of this openness and new information are not yet apparent.

It would be a mistake to infer, however, that the PACE Centers have resolved the State's problems of district and county isolationism and resistance to meaningfully involving resources outside the school system in its further development and change. The PACE Centers are only helping to ameliorate such problems, although a few Centers (perhaps three or four) have been remarkably successful in this respect. However, many of the PACE Centers themselves (at least eight) have been significantly constrained in carrying out their functions by the isolationist influence of those individuals controlling the Centers and resisting its efforts to engender greater inter-agency cooperation and pluralistic involvements.

It has become clear from our interviews and from our previous work in California that of the 21 areas served by PACE Centers, eleven can be characterized as having negative tendencies toward interdistrict or intercounty cooperation, nine as having positive inclinations in this direction, and one is questionable. Therefore, the involvement of different agencies and community groups stimulated by the PACE Centers, as described earlier in addressing the preceding question, takes on added significance in the light of this background information.

In our opinion, previous studies of regional cooperation, in California as well as in other states, have glossed over the pervasiveness and intensity of this problem of isolationism and parochialism. Its existence inhibits the development of quality education and wastes the investments poured into the improvement of educational programs and services. We believe that in the eleven areas where this problem exists, three PACE Centers have made significant progress in ameliorating it, four have helped somewhat, and the other four Centers have barely made a dent.

In the nine areas where a tradition of interdistrict and intercounty cooperation exists, five PACE Centers have capitalized upon it and extended it to a significant degree, two have made some incremental progress, and the other two Centers have wasted the existing opportunities. With regard to the remaining PACE Center service area, a heavily populated one, pluralistic interactions of significance were slow in coming because of some bureaucratic administrative difficulties; but now that those problems appear to be resolved, the Center has the potential of becoming one of the most effective in the nation.

Another important impact of the PACE Centers has been the emphasis they have brought to bear on systematic planning toward improved education. This thrust was given significant impetus by the leverage of Operation PEP, the Visalia-Tulare County Title III project to mount a statewide effort to "Prepare Educational Planners." This project has completed two years of operation and has graduated 190 persons who have been given training in systems analysis, PERT, program budgeting, and cost benefit analysis. These graduates, in turn, have provided some training to at least 500 others. The project was originally planned to focus primarily on training personnel for the PACE Centers but it was enlarged to accommodate additional educational administrators. Initially, those signing up for the course were middle or lower echelon administrators. Lately, a number of superintendents of major school districts have been taking the necessary time (20 calendar days) to participate in the training. The cadre of graduates from this program generally are enthusiastic about its impact on them, and others have noted an increased openness and ability on the part of most of these graduates to plan for and work toward educational change in a systematic, purposeful way.

There are signs that a new ethos is gradually developing in California's system of education, one in which planning is the password and a course in systems analysis the initiation rite. While one can decry the tendency toward "faddism," one must also admit that this new fraternity is bringing some new and long needed approaches to thinking about education in terms of what the results of educational experiences should produce, and how to get those results in less time and with minimum cost.

We were surprised to find as much emphasis and activity as existed for Center staff assisting clients in behaviorally defining objectives for new programs. In contrast to the situation two years ago, at least half of the Centers now appear to be making significant contributions in assisting school personnel in this regard. In several cases the results have been truly exemplary. With the help of Operation PEP, the cadre of people possessing such competence should increase and be more broadly available for use in both project planning and implementation. The workshops held by Centers to focus on such systematic analysis and definition appear to be recognized as stimulating and helpful by most attendees.

A further impact of the PACE Centers derives from the joint emphasis on needs assessment and community participation. In spite of the fact that many of the needs assessments were rather crude and time-consuming affairs, they did produce considerable dialogue among a variety of parties-in-interest concerning what the community thought about the educational program of the schools, what should be done about it, and how to make the desired changes happen. Even though some groups became impatient with the "mickey mouse" aspects of the needs assessment procedures, our interviews suggested that noticeably greater community support for and stimulation of schools occurred in the service areas of 14 to 16 of the PACE Centers as a result of needs assessment dialogues.

There are, however, many places in which the impact of PACE Centers has not been apparent. A few districts are opposed in principle to the use of Federal aid in any form. Some have never gotten the word about Title III or the PACE Centers. A number have heard but don't really understand and will wait for other districts to lead the way.
really understand and will wait for other districts to lead the way.
However, the alert superintendents, those who make it their business to know of what is available for use in the further development of education in their districts, have made it easier for the PACE Centers to carry out their mission of facilitating educational development and change.

PACE Centers are changing the focus of much of their activity with client districts. In the light of intense competition for Title III project funds (and the resulting low proportion of applications approved and funded) and with much of Title III funds now tied up in ongoing projects, PACE Centers now are helping districts less as brokers for funding purposes and more as planning consultants. Initially, the popular view was that Title III could help districts fund those projects and activities they felt they needed but for which "regular" or other program funds were either not available or appropriate. Experience with some of the NDEA titles and with ESEA Title I had conditioned district expectations regarding project applications. Consequently, the severe competition for Title III funds, the low "success ratio," and the more stringent requirements regarding community involvement, needs assessment, innovativeness or exemplariness, project planning and design (including review of the literature and justification of why the applicant was "best qualified" to demonstrate the selected solution), evaluation, and dissemination, and--in urban areas, in particular--the usual difference in size of Title III project grants vs. Title I grants, all combined to make a number of local educational agencies relatively disenchanted with Title III and uninterested in the services of PACE Centers.

Therefore, most Centers now are attempting to help districts both in general and specific planning for educational improvement, but with the idea that Title III support may be appropriate or forthcoming only if the project is "significant enough" (on any of several dimensions) to merit such funding. Other funding sources (including that of the local district itself) are being considered and applications are being developed and submitted to those sources.

Further, the majority of PACE Centers are now working with at least a few districts to plan "multi-program" projects to support more comprehensive efforts to deal with significant educational needs. This thrust should be actively encouraged and vigorously supported. A few of the PACE Centers are attempting to stimulate action both at the state and national levels to facilitate this process and ameliorate the difficulties caused by conflicting guidelines, different funding periods, confusing application requirements, and inadequate coordination with the bureaucratic structure. Among the programs which PACE Centers are attempting to integrate with ESEA Title III are those of the Office of Economic Opportunity, Vocational Education, the National Defense Education Act (NDEA), the Education Professions Development Act, and ESEA Titles I, VI, and VII.

In spite of the positive nature of the several changes previously discussed, there is one process central to the prime thrust of Title III that is not yet well advanced: the process of diffusing educational developments installed and demonstrated in a "host" district into other districts which also should be able to use the demonstrated "solution." While there are a few instances of this diffusion, by and large the greatest impact of Title III to date has been in those districts which are hosting and actually carrying out a project. In a number of cases these projects are innovative in several aspects and represent significant potential for change and improvement. Occasionally, such change already is becoming evident in that district in the behavior both of teachers and students. However, as yet, the seminal or leverage effect of such projects on other school districts generally has been slight. New approaches to facilitate adaptation and adoption must be designed and implemented.

(4) that provisions are made for effective demonstration and dissemination of information about the project and its results

QUESTION--A. 2.4(b) Are efforts being made to communicate the intent(s) of the project(s) to the region's clientele and interested citizens?

The answer is definitely "Yes." Of the several functions carried out by the PACE Centers, probably the function most universally addressed with at least adequate success is that of information dissemination.

Page 19 of Appendix E shows, by Center, the type of staff used to implement the dissemination process, and the number and kind of information techniques utilized. Nine PACE Centers have certificated persons working full time on dissemination; two Centers use a part-time certificated person; three Centers use a classified person full time; three Centers use a classified person part-time; and 13 Centers utilize members of the staff on an ad hoc basis for information dissemination.

Speeches are used for dissemination by at least 16 Centers, and such a technique appears to be used more frequently than any other. Newsletters are used by 17 Centers, bulletins by eight, pamphlets by 11, conferences by 16, seminars by 12, inservice training sessions by 13, press releases by 13, research reports by seven, and professional journals by seven. Twelve Centers maintain a professional library, and 16 Centers provide research information to districts on request.

In the qualitative evaluation of PACE Centers' dissemination activities, it appeared that the process, for the most part, was rather stereotyped and mechanical. The principal difficulty seemed to stem largely from viewing dissemination simply as the distribution of information. The preparation and distribution of information pieces is generally accomplished satisfactorily, with but rare exceptions, but it is a weak method for actually diffusing change into schools. The goal, of course, is to stimulate more and quicker intelligent adoption by other agencies. There is some evidence that a good deal of dissemination effort is wasted because of the "broadside" approach used in addressing various audiences. A few district administrators complained in interviews that they were being deluged with propaganda.

A statewide "switching center" for information collection and dissemination about projects and also concerning the needs the projects are intended to satisfy is a "must" at the state level.

Only a few districts, counties, and Centers appear to be making effective use of the Educational Research Information Center (ERIC). However, the PACE Centers are providing an increasingly useful role as a linking agent in assisting districts and counties to capitalize upon this information resource.

Several Centers have developed excellent research information libraries, particularly on ways of planning for and effecting change. Other collections focus on urban education problems, family life education curriculum, vocational education and counseling, and so on.

In spite of the PACE Centers very considerable efforts in the dissemination of information, considerable misunderstandings still exist regarding the intent of Title III legislation and the purposes and functions of the PACE Centers. A number of Center constituents we visited had only the vaguest idea of the purpose of Title III. Frequently, these misunderstandings were biased by the administrator's regard for the Center or by his own interest in using the money supporting the Center or that going to other projects. We found that those persons most unfamiliar with Title III were also those most apt to be critical of the concept of PACE Centers.

From our interviews in the field it was also apparent that a number of school districts view Title III projects and programs as a "tune up" or "tack on" arrangement. This observation, of course, is closely allied with that regarding misunderstanding of Title III purpose. The concept of a program to support truly significant change in actual educational practice toward more adequately meeting learner needs, has failed to register with a number of administrators. The concept of eliminating practices and programs through evaluation and then replacing them with new ones is foreign to many districts.

While virtually all of the PACE Centers have been recognized and appreciated for developing and circulating information pieces, facilitating visitations to demonstrations, and importing consultants to participate in workshops and conferences, disappointingly little actual diffusion has taken place. It is possible that increased emphasis and facilitation of multiple district participation in needs assessment, project planning, and information dissemination may make it incrementally easier to diffuse changes from a demonstration district into other districts which have become familiar with the project and its results. Perhaps other approaches may be more effective, particularly ones involving staff exchanges, on site "hands on" training for three weeks or so, plus a deeper involvement of administrators in orientations by highly credible peers or consultants regarding the relative advantages and disadvantages of the demonstrated new "solution."

        (5) that provisions are made to continue the program in the event of positive evaluation results

    e. upon request, review completed proposals and make recommendations to the approval agency (agencies)

    f. arrange for Center staff to participate in visiting teams for the purpose of evaluating ongoing projects in other Centers' service area

8. Assist districts which are not importantly involved in ongoing demonstration projects, but which have priority learner needs similar to those treated by a given project, in investigating the feasibility of adopting demonstrated solutions to those needs

    a. focus such efforts to effect diffusion of tested solutions primarily upon school systems relatively prone (for whatever reasons) to innovation adoption

    b. through arrangements with other Centers, assist districts from other parts of the state in investigating locally demonstrated solutions

c. arrange for workshops in districts with successfully operating projects so that participants from other districts or other schools in the same district can become deeply involved

E. EFFECTIVENESS OF ORGANIZATIONAL MAINTENANCE FUNCTIONS OF PACE

1. Identify and fulfill needed change agent roles in the area served by the Center and in ways appreciated by the community and consistent with the spirit of ESEA Title III

   a. determine the nature of the change agent roles and functions required in the Center's service area to complement and supplement existing roles and capacities

QUESTION--B.2.1 To what extent is there an overlapping of the roles and the objectives of these two sets of regional agencies (Data Processing Centers and PACE Centers)?

The overlap of the roles and objectives of Regional Educational Data Processing Centers and PACE Centers is virtually zero.

The emphasis of EDP Centers is toward standardization of a product line of services and procedures so as to increase efficiency of operation, reduce unit costs, and thereby increase their market penetration. The emphasis of PACE Centers is toward the stimulation and facilitation of change. Standardization of a product line is anathema. They work with selected clients who are interested in educational development and change.

The EDP Centers sell their services to districts and attempt to become self-supporting. PACE Centers are totally dependent upon outside funding since they generate no revenues.

The services provided by EDP Centers focused on the aggregation, analysis, and transmission of data and are based on computer technology and the efficient use of hardware and software. The services provided by PACE Centers are focused on planning and are based on highly social and personalized interactions.

The costs of EDP Center operations are capital intensive. The costs of PACE Center operations are labor intensive.

While both EDP Centers and PACE Centers serve districts, EDP Centers can operate effectively as an integral part of the offices of county superintendents but PACE Centers, except in rare instances, cannot.

Under the present structural system of educational administration in California, we conclude that the two different kinds of Regional Centers should not be merged.

b. formulate a strategy for stimulating constructive change in and among local educational agencies

c. establish policy by board action which defines the role of the Center, its primary functions, the staff capabilities required, and the most important issues to be addressed--in the context of Federal and state laws and guidelines related to Title III

QUESTION--A. 2.5 How effective are the Boards of Directors of the center(s) in relationship to the role and the objectives of the center(s)?

PACE Center boards vary widely in their effectiveness in relationship to the role and objectives of the Centers. The critical determinants of board effectiveness appear to be its interest in and commitment to quality education, its "openness" in considering suggestions for educational development and change, and its support of meaningful involvement of various community groups and agencies in such considerations. In general, good sized pluralistic boards comprised of a high proportion of lay representatives and assisted by several specialized advisory committees appear to function with the most felicitous effect.

In general, there is a tendency for those PACE Center boards dominated by educators to focus largely on administrative matters or on pet concerns, to inhibit active community involvement, and occasionally to resist change or criticism of the status quo. This generalization needs to be tempered with the caveat that if the educator members of the board are truly interested in educational development and change and in responding to the most critical needs of students, then they can be as effective as any other group of citizens, particularly if they take advantage of the contributions of various advisory committees. On the other hand, educational administrators tend to reinforce each other in focusing on things they are most used to handling: administrative decision-making. Unless the PACE Center director is an excellent salesman, and some are, the Center will be in danger of being administered by the board, particularly in the matter of finances, budgets, and application of staff time. Further, it is illogical to load the policy board of a PACE Center with those administrators whose institutions and management practices are being studied by the PACE Center, possibly criticized by participating community groups, and, hopefully, changed in substantial ways through such efforts.

The chief danger in a board thoroughly stocked with educational administrators is that few lay people are then in an equal position to challenge their assumptions and question their priorities. In a few instances we noted that boards of this character tended to make up their own minds about the needs to be addressed and quickly zeroed in on what they "knew were the problems" with the resulting effect that the community was never really mobilized in the needs assessment process to the degree necessary to support significant programs of educational development and change.

About eight or nine of the PACE Centers are rather directly under the thumb of a superintendent or are directly controlled by a delegate of the applicant agent. Most of these Centers appear to have difficulty in making a consequential impact either on the organization in which they are located or on the clientele in the service area. In one instance, the applicant agent actually scheduled the Center director's time to take care of personal interests of the applicant agent which were unrelated to the charter of the Center or the wishes of the board. Such a situation makes a mockery of the governing process and can only result in trouble. However, the Center director could not precipitate this trouble for fear that his "boss" would damage his career potential.

In at least half of the several Centers where the board was dominated by county superintendents the district superintendents were not admitted into a full partnership in considering possible courses of educational development. That style of operation tends to exaggerate any proclivities that may exist toward isolationism, parochialism, and resistance to change.

d. adopt and practice management methods and administrative procedures which are consonant with board policy and support the implementation of the Center's strategy for bringing about constructive educational change

    (1) insure that appropriate secretarial help, physical facilities and means of tranpsortation and communication are provided for the support of staff work

    (2) establish salary schedules, staff selection and evaluation processes, working conditions, and other personnel practices which will assure the competence of Center staff and adequate staff continuity

QUESTION--A. 2.2 Is the staffing pattern of the center(s) appropriate for their roles and their specified objectives?

In our opinion, the staffing level of 19 of the 21 PACE Centers is quite appropriate in terms of the objectives of the Centers, their workloads, and the needs of clients. The modal staff level is a director plus three professional staff people. The Butte Center is understaffed for the demand of the area and the geography it must cover, and one of the other Centers is overstaffed because of a lack of demand for staff service.

In terms of the pattern of competencies represented among PACE Center staffs, there is evidence of a shortage of highly competent research and evaluation skills. This shortage is not unique to PACE Centers; it also exists in most other education organizations. A more liberal distribution of this kind of talent and the means to employ it effectively in assisting clients would have been most helpful, especially during the first two years of Center operation. Given the scarcity of this kind of talent and the value of having it available, we would suggest that perhaps one such highly competent research man might be shared by two or even three Centers as the resource person to guide other Center staff people in the development and implementation of assessment and evaluation processes, including ways of analyzing and utilizing derived information.

On the basis of our own assessments plus interviews with users of Center services, we determined that the quality of talent represented on the staffs of the 21 Centers varied considerably among the Centers. As is usually the case, the capability of the Center director has important leverage on the quality and usefulness of the staff. Integrating all our impressions, we would rate 13 directors as either excellent or quite satisfactory, three as unsatisfactory, and the remaining five as possibly satisfactory or position vacant. The salary scales of approximately half of the Centers, most of which were based on the salary structure of the county offices, are low enough to represent obstacles to hiring highly qualified directors and staff. Even so, staff quality was generally quite good. It was truly outstanding in five or six Centers and quite satisfactory in another seven or eight. It varied widely in another five, and it was low or marginal in the remaining three Centers.

The quality of the individuals involved in Title III activities and the personal chemistry among those people are critically important ingredients in the success of a PACE Center. Almost without exception, we found that when competent, eager personnel in a well-managed Center make contact with a sharp, forward looking superintendent, great things are apt to happen. When a superintendent who has established a favorable climate for change and has won the respect and support of his local citizenry effects a working relationship with enthusiastic, sound planners backed up with an array of other resources, such synergism usually results in beneficial effects, even when other factors intervene.

Conversely, when mediocre, even though well meaning Center personnel attempt to get backward or tradition-bound superintendents to think seriously about significant change and to share meaningfully in Title III projects, it is usually wasted effort. And, the most critical factor in this equation is the quality of the superintendent. If he simply is not interested in his district's working toward educational development and change it is unlikely that even first class PACE Center staff could stimulate the development of a meaningful change effort in that district. However, the inverse relationship does not always hold. Top notch superintendents can make a Center staff person with only moderate competence look very good by virtue of what may happen. Perhaps this is true because in order for a superintendent to be top notch he must be able to get the best from his people. Therefore, he is likely to arrange conditions so that he can get maximum effect from the resources of or available to the PACE Center staff with whom he is working.

We need to make it clear, however, that we are not implying that high quality staff are not important to the effectiveness of a PACE Center in stimulating change. Far from it. Even increments of quality appear to have beneficial effects when working in a district where the superintendent is good but not outstanding, or where there are differences among superintendents. The importance of Center staff quality may show up in ability to work with community groups, to stimulate involvement and commitment, to analyze problems in such a way that it is possible to address them in a systematic fashion, and to sensitively involve the right resource persons at the right time.

All the Centers have requirements for planning skills and this seems to be the central characteristic of most Center staff personnel including importantly, skill in drafting project proposals. There is, of course, a genuine need for communication and dissemination skills on the staff of each PACE Center. The extent and quality of such skills appeared to vary from truly outstanding in a few Centers to almost nonexistent in others. Those Centers trading such responsibility off among its staff in general, should review the quality of output and its effects to determine whether more specialized talent would be of greater value.

Center staffing patterns should be viewed from perspectives other than simply functional definitions. We refer here to the matter of personal style and interpersonal skills. We talked to a number of potential clients of Centers who had been "turned off" by the jargon and the manner of visiting Center staff. We feel sure that in many cases the Center staff people could have been of real benefit to those potential clients, if only the personal chemistry had clicked. Centers might intentionally select staff with varied backgrounds and personal style in order to be able to relate individual staff members more effectively to a broader spectrum of clients. Some kind of a mapping process might be employed to estimate which staff could work with which clients to best effect. Relationships established in this way could be used to "broker" other possibly more relevant technical skills into the project planning and development work initiated or "sold" by the contact man.

Other kinds of staff specialization conceivably could be related to types of needs to be addressed in service areas: education in urban areas, special education, vocational education, language development, and the like. However, except possibly for those Centers working primarily in urban areas, these specialties probably could be acquired and applied best through the use of outside part-time consultants, possibly including staff members from intermediate units and university and college faculties.

e. work with constituents so as to become known as helpful and effective planning consultants

    (1) serve as a source of information and of resource, analytical and planning skills useful in mounting coordinated and significant attacks upon important learner needs

    (2) match staff characteristics with the unique nature of client needs and characteristics

2. Periodically evaluate the appropriateness of the Center's defined role, its strategy, the effectiveness and costs to its current functions, the array of services offered (vs. those utilized), the allocation of time and effort, and the appropriateness of the staffing pattern of the Center

3. Modify the Center's role, strategy, functions, budget, services offered, staffing pattern, and allocation of time and effort in light of evaluative information regarding current needs in the service area, the existence of other resource agencies, and new state and Federal priorities and guidelines

4. Exchange information among Centers regarding newly developed techniques, results of literature searches, useful resource persons and agencies, results of project planning efforts, project proposals (including those rejected, together with reasons why), the progress and results of operational projects, the existence and availability of unique or highly developed skills among Center staff, new approaches to project evaluation, information dissemination, and the stimulation of diffusion of demonstrated solutions to other districts, etc., to the end that the fruits of the efforts of all Centers can be made more widely available to the people of California

5. Cooperate with other agencies and institutions in planning ways in which the roles of each can be differentiated and functional linkages established among them so as to facilitate efficient operation of a true "system" of educational development

   a. recognize and accommodate the interdependence and exploit the complementarity among educational research and development centers, institutions of higher education, regional educational laboratories, the state department of education, intermediate units, school districts and supplementary educational (PACE) centers in carrying out the process of educational development and innovation adoption

   b. with the guidance and support of the state department of education and appropriately involving intermediate unit personnel, assist in arranging projects and activities to facilitate the diffusion (dissemination, adaptation, and adoption) of demonstrated solutions to important learner needs

   c. utilizing appropriate resources of the state department, intermediate units, teacher training institutions, outside consultants, and professional organizations, focus the diffusion efforts primarily upon districts characterized by openness to change and by learner needs similar to those successfully met by demonstrated solutions

d. capitalize upon visits of resource persons to the Center, and to agencies planning or operating projects, for inservice training and development of Center personnel

F. IMPLICATIONS OF EVALUATION RESULTS FOR THE REGROUPING OF PACE CENTERS AND CLIENT SERVICE AREAS

QUESTION-- A. 2.1 In what ways are the bases for grouping of the clients of the centers sound in terms of the needs of these patron agencies? Should the basis of satisfying these needs be through a definable number of institutions or a combination of such institutions?

QUESTION--A. 2.3(d) What relationship does the size and the geographical proximity of the center of the participating districts bear to these activities?

There are two important points that need to be made with respect to the first question. First of all, in the early planning for structuring service areas of PACE Centers, it was determined that service areas would be defined relative to a criterion of student enrollment. It was expected that each PACE Center would serve a student enrollment of from 100,000 to 300,000. Our study strongly suggests that enrollment level does not appear to be the only nor the most significant criterion for determining Center service area size. Instead, two other factors appear to be at least as important, if not more so. These are (a) geography, and (b) number and size of individual school districts in the service area. There are at least two and probably three PACE Center service areas which make excessive demands on staff in terms of travel requirements. Time is lost in traveling long distances and additional meetings are sometimes necessary to accommodate constituents' travel constraints, and therefore attendance at meetings is often poor. In those situations of low population density and widely scattered, small school districts, the enrollment criterion should be secondary to that of geographical distance.

PACE Center personnel rarely work with students; therefore, enrollment level is a rather artificial criterion. When they work with teachers, it is primarily in a workshop, a seminar, or a planning session. And, of course, there are finite limits on the number of community representatives they can work with regardless of the size of the service area. In other words, no matter how large or small the enrollment, each PACE Center person will be working with virtually the same number of individuals, only the proportion of total population contacted would vary--and a larger staff could adjust for that, as is done in Los Angeles.

Another factor which should have entered importantly into considerations of establishing PACE Center service area boundaries is the difference in demographic characteristics among school districts in given areas (usually counties or groups of counties). We found that these differences can significantly affect the way PACE Center personnel relate to clients, and the quality of working relationships among districts in a Center's service area. Those districts generally high on the socioeconomic scale and located in suburban areas close to cultural resources and varied employment opportunities generally have little in common with rural, agricultural areas where the style of life and the nature of educational needs may be quite different. We have noted the existence of several schisms within PACE Center service areas which appear to be directly related to demographic differences between counties or school districts, and to the nature of school personnel selected by those differing districts. Therefore, unless there are other compelling reasons, counties or districts significantly disparate in demography probably should not be combined in the same Center service area.

The second question in this item raises a very interesting possibility, namely, that of establishing a matrix of interactions among PACE Centers whose service areas contain individual client districts manifesting similar educational problems and needs. For example, a project could be developed with three such similar school districts each of which was in a different PACE Center service area. It might be possible to go even further and start up three projects, one in each of the three (similar) school districts, so that a different need might be addressed by each of the three projects, and so that staff and students from each of the three schools could participate in the projects. This mixing of districts participating in various projects that cross Center boundary lines would require improved coordination and communication among PACE Centers, an improvement greatly to be desired in any event. However, it would afford new combinations of districts and projects which might extend the benefits of participation to districts not so benefited before. Therefore, we conclude that while PACE Centers should be headquartered in a given location and should be assigned a defined service area, there should be not only provision for, but encouragement of, interchange of staff, interchange of clients, and interchange of information. Coordination and planning for these kinds of interchanges should be a responsibility of state level administration in concert with selected groups of PACE Centers. This flexible, matrix arrangement will permit the State to derive greater value from investments in and the operations of its PACE Centers.

QUESTION--B. 2.2 What is the need for a structural reorganization in the region, in the area, or in the state beyond the specified center itself to accomplish the purposes which are involved in the educational system of the state?

In further considering the most feasible and economic ways of grouping the clients of Centers and organizing the areas to be served by each Center, it is important to take into account other findings from our evaluations:

1. The concept of regionalization is sound; some highly valuable incremental benefits are accrued by establishing multidistrict and multicounty groupings whenever logistically (and politically) possible.

2. Over half of the PACE Center service areas have a tradition of strong local autonomy and a history of resistance to substantial interagency cooperation.

3. PACE Centers tend to be less effective in carrying out their mission when they are controlled by the applicant agent.

4. Eight of the PACE Centers are more or less "owned" either by the applicant agent or by a small group of administrators.

5. Districts comprising the service area of some Centers differ significantly in demographic characteristics, thus adding to the difficulty of facilitating interdistrict cooperation and inhibiting the potential effectiveness of those PACE Centers.

6. The modal PACE Center staffing level of a director and three professionals does not fully exploit the capabilities of a good manager nor justify the cost of his management skills. More staff per manager can be justified.

7. Three Centers are operating poorly, and three more are only marginally satisfactory. They should be reorganized.

8. In order to make the most efficient use of scarce resources in facilitating educational development through demonstration and dissemination projects, PACE Centers should focus their planning assistance on fewer districts which have greater likelihood of striving for significant improvement, of mounting effective demonstrations, and of maintaining the new educational development after termination of Federal funding.

When these conclusions are translated into an organizational framework for the PACE Centers, taking geographical constraints into consideration, the resulting recommendations for the short term are as follows:

1. Reduce the number of PACE Centers;

2. Reorganize the territory and clientele served by slightly over half of the Centers;

3. Increase slightly the staffing level in a few Centers;

4. Establish a joint powers agreement as a basis for chartering and governing those PACE Centers where agreements can be effected by participating agencies; and

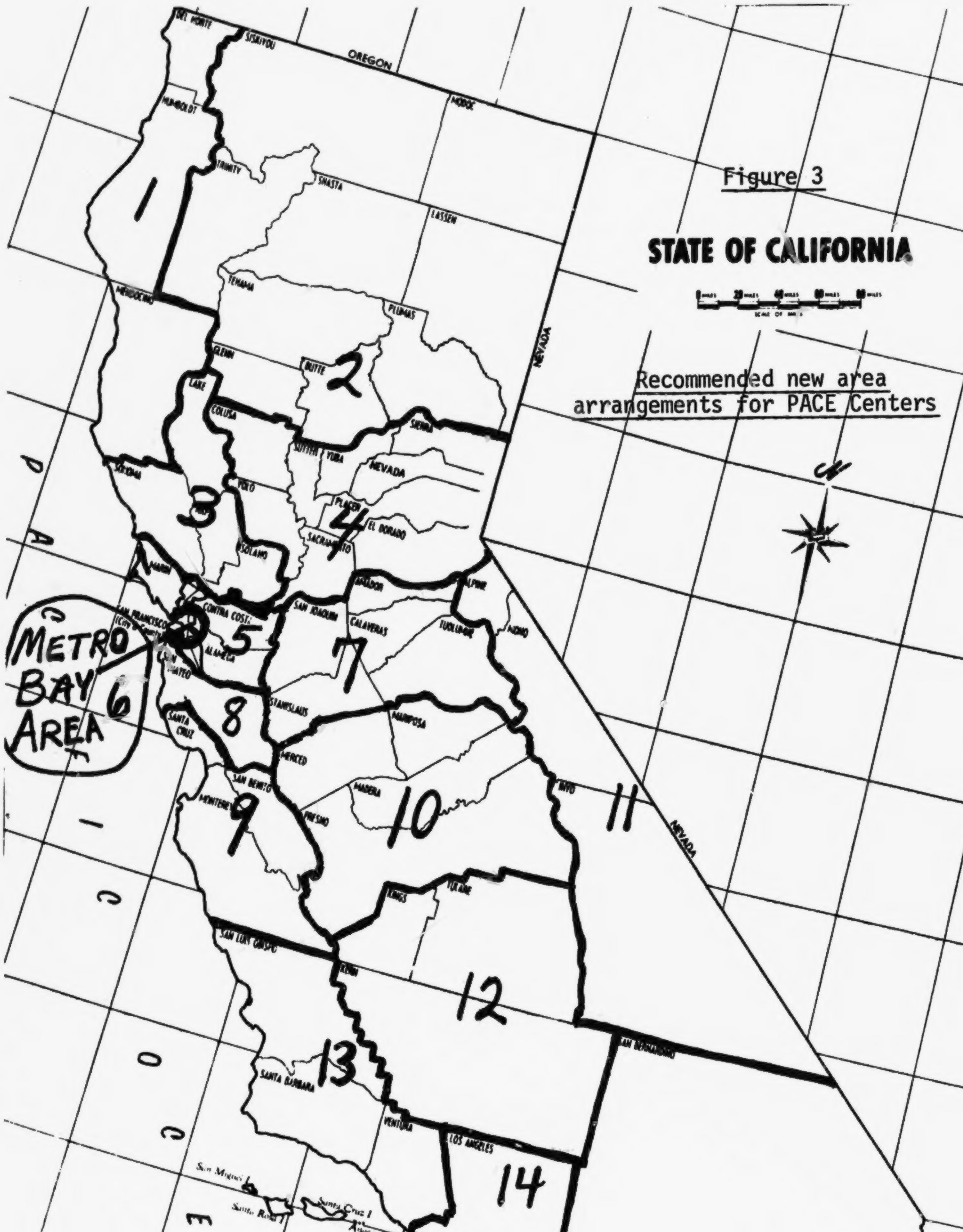
5. Redefine the legal role and, if necessary, amend the statutory responsibilities of the applicant agent for the remainder of the Centers.

Our long-term recommendation to the State Board and the Legislature is for a reorganization of the 58 Offices of County Superintendents of Schools into a consolidated, strengthened network of from 20 to 25 intermediate units with elected boards and appointed superintendents; and with both PACE Centers and Data Processing Centers (where appropriate) incorporated into each new revitalized intermediate unit.

We recommend that the new State Educational Innovation Advisory Commission consider the feasibility of reorganizing the PACE Centers and their service areas, at least for the immediate future, as suggested below and shown on the map as Figure 3. This reorganization constructively responds to the eight findings listed on page 104 by (a) extending and capitalizing further upon the valid concept of regionalization; (b) ameliorating problems of overcontrol and autonomous operation by several applicant agencies; (c) merging less effective Centers with more effective ones; (d) making more efficient and cost/effective use of management resources, staff and facilities; and (e) accommodating demographic differences among client districts served by the Centers.

1. Del Norte, Humboldt, and Mendocino counties.
2. Siskiyou, Modoc, Trinity, Shasta, Lassen, Tehama, Plumas, Glenn, and Butte counties.
3. Lake, Sonoma, Napa, and Solano counties.
4. Colusa, Sutter, Yuba, Sierra, Nevada, Placer, Eldorado, Sacramento, and Yolo counties.
5. Marin, Contra Costa, and Alameda counties (minus districts below).
6. The Metropolitan Bay Area districts of San Francisco, Richmond, Berkeley, and Oakland.
7. San Joaquin, Amador, Calaveras, Tuolumne, and Stanislaus counties.
8. San Mateo and Santa Clara counties.
9. Santa Cruz, Monterey, and San Benito counties.
10. Merced, Mariposa, Madera, and Fresno counties.
11. Alpine, Mono, and Inyo counties.
12. Kings, Tulare, and Kern counties.
13. San Luis Obispo, Santa Barbara and Ventura counties.
14. Los Angeles County.
15. Los Angeles City.
16. San Bernardino, Riverside, and Imperial counties.
17. Orange and San Diego counties.

We recognize that this suggested reorganization should be more finely tuned. It should be viewed merely as a "first cut" at more appropriate regional grouping. Some important differences in district demography have not yet been accommodated sufficiently, especially in southern California. Moreover, it would be improper to attempt to "impose" such regrouping on affected districts, counties, and PACE Centers without involving them in the planned reorganization. Such involvements and negotiations undoubtedly will result in groupings at least somewhat different from those suggested. However, it is important that the reorganization result in fewer PACE Centers and that the regional concept of joint planning and multiagency (counties and districts) cooperation be further extended and implemented.


DEL NORTE
SISKIYOU
OREGON
MODOC
HUMBOLDT
TRINITY
SHASTA
LASSEN
1
MENDOCINO
TEHAMA
PLUMAS
GLENN
BUTTE
2
LAKE
COLUSA
SIERRA
SUTTER
YUBA
NEVADA
SONOMA
YOLO
PLACER
EL DORADO
3
4
SACRAMENTO
SOLANO
MARIN
AMADOR
ALPINE
CONTRA COSTA
SAN FRANCISCO
SAN JOAQUIN
CALAVERAS
TUOLUMNE
MONO
METRO BAY AREA
5
6
ALAMEDA
SAN MATEO
7
STANISLAUS
MARIPOSA
SANTA CRUZ
8
MERCED
SAN BENITO
MADERA
MONTEREY
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FRESNO
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INYO
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KINGS
TULARE
SAN LUIS OBISPO
KERN
12
SAN BERNARDINO
13
SANTA BARBARA
VENTURA
LOS ANGELES
14
San Miguel I
Santa Rosa I
Santa Cruz I
Anacapa I
Santa Barbara I
San Nicolas I
Santa Catalina I
San Clemente
ORANGE
RIVERSIDE
16
SAN DIEGO
17
IMPERIAL
ARIZONA
MEXICO
L.A. CITY 15
N

Figure 3

STATE OF CALIFORNIA

Recommended new area arrangements for PACE Centers

G. IMPLICATIONS OF EVALUATION RESULTS FOR STATE-LEVEL DEVELOPMENTS AND GUIDELINES REGARDING TITLE III AND THE PACE CENTERS

1. Allocation of Title III funds

QUESTION--A. 1.1 What share of enabling funds provided for the operation of these centers should be specified for planning activities as compared with the share that is allocated for the operation of projects that are directed toward satisfying the client needs in a region? Is the present allocation of these shares reasonable for the center(s)?

The mission and functions of the Title III PACE Centers are neither performed by any other institution nor funded by any other program. However, this mission must be carried out and the functions performed if an appropriate strategy for improving educational quality is to be adopted and a systematic attack launched upon important problems. For these reasons the support of the PACE Centers should be the first priority use of available Title III funds.

The 1967-68 allocation of funds between the support of the planning functions of PACE Centers (approximately 20 percent of the State's allotment) and the support of projects in districts and intermediate units (approximately 80 percent of the allotment) was reasonable and appropriate.

In light of the unique mission of the PACE Centers, and considering the increased leverage they should have on the process of educational development in the State after they are regrouped and reorganized, it is imperative that their existence be maintained and supported. It is strongly recommended that Title III be amended so that funding of continuation projects for the support of PACE Centers can be extended.

In the absence of Federal funds to support the PACE Centers at an annual level of approximately $2,500,000, State funds should be appropriated for that purpose. The existence of and benefits from PACE Centers should not be made contingent upon continued Federal funding.

Further, it would be a mistake to tie the financial support of the PACE Centers directly to an arbitrary percentage of State Title III funds. Rather, the level of PACE Center financial support should be related to a percentage, say 1 percent, of all Federal and State categorical aid funds applied to the improvement of instruction. The logic here is that the unique mission of the PACE Centers is to help plan for and stimulate more effective diffusion of promising educational developments, however they are defined or classified. The variety of applications and uses of Title III funds represented among the Legislature's several bills which were concerned with Title III this year amply demonstrates the potential scope and breadth of the activities with which PACE Centers should be legitimately concerned. Since PACE Centers help plan projects involving the packaging and use of a number of programs other than ESEA Title III, it would be inappropriate to limit PACE Centers exclusively to support from that title.

2. Assembly Bill 1865

We feel obliged to react to the recently enacted AB 1865, since it deals so explicitly with some of the issues with which this study was concerned. In our view the new statute contains some very constructive and some potentially destructive elements.

We endorse:

Section 591.2 enabling the State Board to support experimental projects developed in cooperation with ESEA Title IV;

Section 592.1 requiring an annual evaluation report by the State Board regarding the effects of the Title III program;

Section 593 supporting the statewide dissemination of information regarding particularly exemplary projects; and

Section 593.1 providing for incentive grants to encourage districts to expand their exemplary demonstration projects.

We respectfully oppose:

The degree to which priorities are defined in detail in Section 591. In particular, subsection (c), specifying that priority shall be given to districts with elementary schools having particularly large concentrations of pupils with poor reading achievement scores, is likely to contravene the basic spirit and intent of Title III. There is no reason to believe that schools with such intense problems are the best setting in which to develop and from which to diffuse exemplary solutions to such problems. We agree that projects should be implemented where there is a legitimate requirement for the development of improved solutions to defined educational needs. But, in our view, the unique value of Title III lies in its requirement that the proposed plan for solving a critical problem be judged the best such plan against defined criteria and in open competition with other project proposals. The potential value of Title III will be greatly attenuated if projects are approved and funded primarily upon basis of demonstrated need.

Sections 590.1 and 590.2 which provide for the fiscal year termination of PACE Centers and the transfer of their functions to other educational agencies. This study demonstrated the unique role and the value of the PACE Centers. It spelled out the reasons why other agencies cannot effectively fulfill the mission and carry out the functions of the PACE Centers.

In our view there are only two viable long-term alternatives to the present situation: (a) a joint powers agreement among participating local educational agencies, or (b) a consolidated (no more than 25) and revamped system of intermediate units to which the PACE Centers could be attached as the intermediate units' planning and research and development arm. In any case, if Federal funding for the PACE Centers is terminated, then for the sake of quality education in California, the State should arrange to support the reorganized network of PACE Centers.

3. The State Plan for Title III

We compliment the drafters of the State Plan for Title III. The strategy for stimulating and inducing educational improvement and change, as briefly outlined, appears to be sound. There is an appropriate appreciation of the unique role and importance of the PACE Centers as partners in implementing that strategy. Administrative procedures, including those for reviewing and approving projects, are clearly spelled out. The list of 20 criteria which must be met in securing project approval is formidable but highly relevant and appropriate. The emphasis on terminating unsuccessful projects in order to apply funds thus committed to potentially more fruitful projects is most appropriate. Section 2.3.16 regarding the dissemination of information concerning successful projects is particularly insightful. The heavy emphasis upon educational needs assessment and upon evaluation as a basis for decision making is quite appropriate; but, as we have attempted to show, the exposition does not go far enough in planning for the support of the final and most important steps of the diffusion process, those of adaptation and adoption.

Other elements of the State Plan with which we differ include: (a) the composition of the State Advisory Council (too heavily loaded--11 of 16 --with educators, particularly administrators); and (b) the location of the Title III administrative unit within an operating division (the Division of Instruction) with all that implies for probably "divisionalitis," (i.e., inadequate communication, interaction and coordination with professionals in other divisions, particularly Special Schools and Services, Compensatory Education, and the recommended division of Adult and Vocational Education). We believe that using the allocation of funds for state-level Title III Administration specifically to support the program planning, evaluation, and information dissemination functions of a single division short changes the potential yield and benefits from the title. We support a proposed staffing level for the Title III administrative unit(s) of approximately 20 professionals. This would encumber about half of the allocation for administration, permitting, the other half to be used for supporting evaluation teams, information dissemination, and diffusion efforts such as seminars and workshops.

H. CRITICAL PROBLEMS OF SCHEDULING AND FUNDING

Problems with funding have been a significant deterrent to the overall effectiveness of the PACE Centers. One of these problems is related to the amount of funds available. Even more serious has been the poor timing and the uncertainties attending the present funding procedures.

The small (relative to demand) amount of money available for Title III projects was a serious problem for the PACE Centers during their first two years of existence. Reacting to the promise inherent in the dramatically escalating schedule of annual Title III allocations (not appropriations) in the legislation, most of the PACE Centers advertised themselves (at least by implication) to their potential clients as an entree to Federal funds. As a result, the PACE Centers were deluged with requests for help in writing proposals. When the majority of the project applications were turned down (in one area, 27 of 27 were rejected, the Centers lost face with many of their client districts. As a result, some PACE Centers almost folded.

For most of the Centers, this meant a re-assessment of mission and the development of new "products" or services to provide to clients in addition to their project planning and writing and "grantsmanship" capabilities. The development of these new "products" and their subsequent appreciation by an ever-increasing number of school districts has helped to ameliorate to a large extent the early disenchantments felt toward several of the PACE Centers.

There are, however, two problems in funding which continue to have a negative impact on the effectiveness of the PACE Centers: (a) the uncertainty faced by many of the Centers as they await continuation funding; and (b) the scheduling cycles of the projects submitted through the PACE Centers for approval and funding by the State and Federal governments.

As we made evaluation and interview visits to the PACE Centers during July and the first part of August, we found many in a state of turmoil because they had not as yet been given any confirmation of funding for the current fiscal year. Each of these Centers began the new fiscal year either on June 1 or July 1 and was operating either on what little funds remained from the previous year's budget or on financial support from counties. Because of the uncertainty, much of the work on projects and services had been either curtailed or completely stopped. One Center which had only recently begun to generate considerable interest and support among its client districts was forced to turn down requests for help from districts it had taken two years to "recruit." The momentum gained during the prior nine months was completely blunted. If this situation is allowed to continue from year to year, it is certain that the PACE Centers' calendars will contain a "slack season" or their budgets will incorporate a "contingency fund."

The uncertainty about continuation funding of the Centers causes a serious personnel problem. During our visits, many Center staff were actively pursuing other positions in education. As a result, several competent PACE Center Directors have taken other positions which offer more security (and, often, less excitement and challenge). One Center lost two-thirds of its staff; San Diego lost its entire staff.

At a time when Title III in California seems to be gaining momentum and producing desired change, discontinuities occasioned by heavy turnover by PACE Center staff cannot help but have a "slowing down" effect on the contributions of the Centers. Much of this staff turnover could be eliminated if some of the uncertainties were removed. Continuation funding, or at least assurance of that funding, well before a Center begins its next fiscal year, seems an appropriate place to begin the remedial process.

Mentioned time and again as a problem was the "lag" period between the time a project is approved and the time it is funded. Administrators and teachers who have invested heavily of their time and interest in planning a project find that after waiting six to nine months for the funds to implement the program, they have lost much of their enthusiasm. To effectively capitalize on the interest and enthusiasm generated during the planning process, the lag period needs to be shortened considerably.

Closely related to this issue is the problem that is caused by the inappropriateness of the time when the funding is often granted. Most school officials feel the grant periods should be congruent with the regular school year. This would mean beginning the project the first of September and carrying it at least through the following June. To facilitate this scheduling, the funding should begin no later than June 1, so that material and supplies can be purchased, facilities can be secured, and staff hired and put to work planning during the summer months. As it is now, many applicants are funded in months such as October or January which means they must implement the project in the middle of a school year. As school people know, this is not a good time to hire the specialized staff needed nor to pull children out of other regular programs in which they are enrolled.

The new State Plan's provision for a February deadline for all project applications may help to resolve this problem, if grant decisions can be made by the end of spring.

APPENDIX A

THE STUDY APPROACH AND THE QUESTIONS ADDRESSED IN THE STUDY AS PRESENTED IN THE REQUEST FOR PROPOSAL

I. STUDY APPROACH

The first step was to write a proposal responsive to the Request for Proposal (which was developed by a Study Specifications Committee) issued by the San Jose Unified School District. We carefully studied the RFP, the official (Title III) PACE Manual, and important items in the literature regarding the development and effects of Title III. We reviewed other Title III project applications we had assisted in writing, and then we wrote and submitted this proposal, outlining an approach which seemed to deal effectively with the questions in the RFP. We organized our staff into appropriate task groups and obtained required staff time commitments. After receiving the contract award, we reviewed additional materials made available to us through the San Jose Unified School District and met with District representatives--including the Project Coordinator, with whom we worked closely throughout the course of the study--to test our understanding of the project, to identify any potential problems or pitfalls not yet apparent, and to agree upon an initial study/work plan.

In order to insure a common data base for comparisons among the 21 PACE Centers, we designed a comprehensive questionnaire to be filled out by the Centers, drawing upon information in continuation grant proposals made available to us. We tested this questionnaire in pilot runs with two PACE Centers. Drawing upon our experience and upon information collected by the Project Coordinator, we then revised the questionnaire and sent it to the other 19 Centers. (We purposely overengineered the initial questionnaire in order to be sure to cover all necessary ground.)

Visits were scheduled with each of the Centers, and the returned questionnaires were reviewed by ADL team members before visiting at the Centers. In the early interviews we used two- and three-man teams with rotating memberships in order to insure similarity in style of interviewing, equivalency of data collected, and nature of follow-up pursued. Regular team meetings were used to recalibrate our interviewing techniques and for interpreting and testing our findings. The development of monthly progress reports to members of the Advisory Committee was still another method of information sharing within the study team, as well as with our client.

After spending at least a day in interviews with the staff of each Center, the study team dispersed for interviews with "users" or potential clients of the PACE Centers. In addition to visits, a number of telephone contacts were made to extend the sample and degree of feedback. Contacts with constituents in a PACE Center's service area ranged from twelve to twenty-five. If the results of the first ten or twelve contacts were quite similar, and if they were consistent with our own appraisals, we made no more than twelve contacts. A larger number of constituent contacts was made (a) in particularly large and far flung service areas, (b) when we received inconsistent information from the various contacts, (c) where the initial reports differed from our own appraisals, or (d) where study team members had some differences of opinion about PACE Center characteristics or operations.

Summary descriptions were then developed by each team member for each PACE Center visited. These were compared and collated. Attempts were made to rank order the effectiveness of Centers in terms of their demonstrated or apparently emerging effectiveness in stimulating and planning for change in school district educational practices. We then analyzed the top group and the bottom group of PACE Centers to see what characteristics or functional attributes appeared to be associated with their success or lack of it. We also associated these attributes with the expectations of constituents regarding their PACE Center's role and operations. These analyses were then collated in order to specify what PACE Centers should be expected to do, i.e., their required functions, in order to produce constructive change in client systems. We then examined the set of defined functional requirements and, drawing upon the literature (some of which is presented in Appendix B and also in Chapter II) and upon our own direct observations, defined those organizational maintenance functions necessary to enable the Centers to fulfill those functional requirements related to providing effective service to client districts. (The results of this analysis and synthesis are presented in Appendix C as a statement of the mission of PACE Centers and the rather ideal and detailed statements of their functional and organizational maintenance requirements.)

We then compared the data (questionnaire, interviews, printed material, and exhibits) on each Center with the set of expected functional requirements and organizational maintenance requirements in order to produce a general profile of the evaluation ratings of each Center. These evaluations, together with other data from the Center questionnaires, were used in answering most of the questions listed in the RFP. Much of our response to those questions is presented in the latter portion of Chapter IV. The tabular display of Center responses to our questionnaire is presented in Appendix E.

Meetings with the Advisory Committee were used in the early phase of this study to review the study design and answer questions regarding our design and study methods and, in the latter phase, to discuss our emerging findings and test the validity of our tentative conclusions and recommendations. The final meeting was for the purpose of reviewing the preliminary final report, and collecting comments and criticisms preparatory to writing the Final Report.

II. QUESTIONS PROPOUNDED IN THE REQUEST FOR PROPOSAL

A. Questions Related to the Regional PACE Centers[1]

1.1 What share of enabling funds provided for the operation of these centers should be specified for planning activities as compared with the share that is allocated for the operation of projects that are directed toward satisfying the client needs in a region? Is the present allocation of these shares reasonable for the center(s)? (Ch. IV, Section G.1, pp. 107-108)

1.2 Is there regional participation in the determination of and in the actual assignment of priorities for the activities, including the project of the centers? (Ch. IV, pp. 76-77)

1.3 What evidence supports or denies the effectiveness of these planning centers in terms of:

(a) the community outside of the school districts and the state school system? (Ch. IV, pp. 86-89)

(b) the involvement of the schools and other community organizations in decision making? (Ch. IV, pp. 79-82; also p. 90)

(c) the process by which needs have been identified and involved in the center(s) activities? (Ch. IV, pp. 73-79)

(d) the outcomes of center activity as indicated by projects, the recipients of projects, or other specified activities which involve regional clientele? (Ch. IV, pp. 82-84)

(e) the manner in which priorities are determined? (Ch. IV, pp. 77-78)

1.4 What identifiable changes have occurred in the client service area in terms of attitudes, procedures, and improved instructional or pupil performance programs? To what extent are these changes perceived by these clients as attributable to the program(s) of the center(s)? (Ch. IV, pp. 89-93, 70-72)

2.1 In what ways are the bases for grouping of the clients of the centers sound in terms of the needs of these patron agencies? Should the basis of satisfying these needs be through a definable number of institutions or a combination of such institutions? (Ch. IV, pp. 102-106)

2.2 Is the staffing pattern of the center(s) appropriate for their roles and their specified objectives? (Ch. IV, pp. 98-100, 104-105)

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[1] Following each question is an indication of where the response(s) to that question can be found in the report.

2.3 What number and relative percent of districts or agencies participate in projects in the region? What number and relative percentage of projects are initiated outside the center by these client organizations? How is this number and percent, in each case, related to the number of students to be served directly, or indirectly by these projects? What relationship does the size and the geographical proximity of the center of the participating districts bear to these activities? (Ch. IV, pp. 84-86, 102-103; Appendix E)

2.4 Are the identified needs being met by the project(s) clearly defined and are efforts being made to communicate the intent(s) of the project(s) to the region's clientele and interested citizens? (Ch. IV, pp. 74-76, 93-95)

2.5 How effective are the Boards of Directors of the center(s) in relationship to the role and the objectives of the center(s)? (Ch. IV, pp. 97-98, 104-105)

B. Questions Related to both the PACE and the Data Processing Centers

1.1 Should there be a merging of these two agencies in view of the data developed in this analysis and the suggested courses of action? Ch. I, p. 20; Ch. IV, p. 96)

1.2 What are reasonable sequences of action for these centers within the current time span that is specified for the present funding sources which are available to them? (Ch. I; Ch. IV, pp. 102-111)

2.1 To what extent is there an overlapping of the roles and the objectives of these two sets of regional agencies? (Ch. IV, p. 96)

2.2 What is the need for a structural reorganization in the region, in the area, or in the state beyond the specified center itself to accomplish the purposes which are involved in the educational system of the state? (Ch. IV, pp. 103-106, pp. 108-109; also Ch. I)

APPENDIX B

THE GENESIS OF THE ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965, WITH EMPHASIS ON TITLE III

The passage of the Elementary and Secondary Education Act (ESEA) in April, 1965, has been hailed as probably the greatest landmark in the history of Federal aid to education. Like all other important social legislation, it was the product of a wide variety of intellectual, economic, political, and social forces. Most important in the genesis of this Act was the interaction of Presidential, Congressional, group interest, and bureaucratic forces in Washington.

For nearly a century bills had been introduced in Congress to tap the enormous tax base of the Federal Government in order to provide general support for public education. However, such attempts to develop legislation for various Federal grants-in-aid for elementary and secondary education were systematically frustrated.

In spite of President John F. Kennedy's eloquence in articulating the need for Federal aid to education, Congress gave his bills disappointing support. He designated his education bill of 1961 "probably the most important piece of domestic legislation" of the year. In his general aid bill of that year he asked for a three-year authorization of more than $2.4 billion to help the states construct elementary and secondary classrooms and to boost teachers' salaries. His other requests for educational support were related to loans to colleges and universities for construction of dormitories, classrooms, laboratories, and other academic facilities; support for educational television; aid for medical and dental education; aid for education of migrant workers and their children; a substantial Federal scholarship program for prospective college students; and the establishment of a Federal Advisory Council of the Arts. In 1962 he proposed grants to improve the quality of teaching, a program to combat adult illiteracy, and special training for handicapped children.

It is reported[1] that all of the Kennedy recommendations emerged in whole or in part from the United States Office of Education (USOE), first under the leadership of Commissioner Sterling M. McMurrin and then under the leadership of Commissioner Francis Keppel. The recommendations of these commissioners and their staff advisors were based on suggestions and assistance from educational associations and from education-minded legislators and their staffs.

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[1] Stephen K. Bailey, The Office of Education and the Education Act of 1965; Inter-University Case Program No. 100; published for the ICP by the Bobbs-Merrill Company, Inc., College Division.

Although Keppel had been neither a public school teacher nor a superintendent, he was appointed Assistant Dean of Harvard's Graduate School of Education at the age of twenty-three and Dean at the age of thirty-two. He was obviously committed to improving the quality of public education in America and both he and President Kennedy saw his mission as Commissioner of Education primarily to achieve major legislative breakthroughs in the field of Federal aid to education and to improve the quality of education generally.

A number of Kennedy's bills for categorical aid to education were enacted but his general aid bills for elementary and secondary education were killed. Division of Congressional opinion regarding three long-standing issues frustrated passage of these general aid bills. These issues were (a) the fear of Federal control of the educational system, (b) the prickly issue of church-state relations, and (c) the fear on the part of southern legislators that Federal aid was to be used as a club to enforce school integration. Other lesser issues included the question of how to equitably distribute Federal funds among the several states.

The Civil Rights Act of 1964 removed one of the most controversial issues from the legislative struggle for massive Federal aid to education through Title IV by mandating assistance from the USOE in the form of advice and money for the desegregation of schools, and through Title VI, by providing for injunctions against Federal grants to school districts and institutions of learning which practice segregation.

Lyndon B. Johnson decided to make Federal aid to education and the elimination of poverty his two central domestic issues in his presidential campaign of 1964. He convened a series of task forces to study and report on ways and means of accomplishing the goals of his Great Society program. These task forces were composed of scholars, influential private citizens, and highly placed government officials. In spite of the blue-ribbon character of these task forces they were held to secrecy and considerable anonymity. They met frequently during the late summer and fall of 1964.

John Gardner, then president of the Carnegie Corporation, chaired the Task Force on Education. The Commissioner of Education was a member ex-officio of this Task Force. This provided entree for the introduction of a number of ideas, suggestions, and potential problem solutions from the staff of the USOE and from their contacts with other key leaders in education. Bailey's paper[2] indicates that these suggestions reflected in large measure the series of policy decisions within the USOE which in turn had been developed in conversations and memo exchanges between Keppel and the leadership of HEW (especially Undersecretary Wilbur Cohen, now Secretary).

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[2] Ibid.

A number of other institutions also had participated in working over these policy suggestions and recommendations, including the National Education Association (NEA) and the National Catholic Welfare Conference. The emergence of these Task Force recommendations and their translation into legislation was a classic example of consensus building in the style approved and practiced by Lyndon Johnson. These policy recommendations were cleared by Keppel with key White House contacts and also in the Bureau of the Budget. Keppel also did a yeoman's job of keeping key Senators and Congressmen informed and aware of such developments. These Senators and Congressmen represented such powerful groups as the Senate Subcommittee on Education; the Senate Subcommittee on Appropriations for Labor, Health, Education, and Welfare; the House Committee on Education and Labor; the general Subcommittee on Education of the House Committee on Education and Labor; and the Subcommittee on Labor, Health, Education, and Welfare of the House Appropriations Committee.

In addition to Keppel's pervasive influence, significant contributions and support came from his staff members such as Samuel Halperin, then Director, Office of Legislation; Peter Muirhead, then Director, Bureau of Higher Education; and Frances Ianni, then Director, Division of Educational Research.

In his brokerage role, Keppel also traded extensively on the influence of other thinkers, writers, and conditions in society at large: educator James B. Conant, economists Theodore Schultz and Seymour Harris, the spate of articles about Johnny's ability to read, the pressure of numbers on the American school systems, and importantly, the educational implications of Soviet victories in space and weaponry. Also, beginning to be importantly influential was the increased public awareness of the plight of the disadvantaged, specifically black and poor people, and the anomaly of ugly pockets of urban and rural poverty in the midst of national prosperity. This increasing awareness prompted a series of ideas, questions, and pressures which deeply affected attitudes toward public education. Kennedy's regime also induced a new readiness to cooperate in a search for a workable compromise regarding the church-state issue, especially in the light of the failure of both Catholic and public educational systems to cope with important social issues. A continuing important influence was the NEA's traditional insistence upon unrestricted general aid for public schools and the emerging acceptance by that body of massive categorical aid for the poor, with parochial schools sharing in some of the benefits.

The election results of 1964 represented a smashing victory for President Johnson and an endorsement of his platform. Johnson's priority concern with education and his influence on a sympathetic Congress were essential conditions for the passage of new Federal aid legislation. The election to the House of some eighty liberal Democrats pledged to the enactment of Federal aid to education helped to insure the sympathetic response of Congress.

President Johnson's charge to the Education Task Force chaired by John Gardner was to develop a fresh dialogue, and to "think big" about ways of bringing about significant change in education, change which would deal more effectively with the critical issues of our times. Even though the Task Force was not specifically chartered to draft legislation, a good deal of evidence suggests that the first draft of the ESEA bill, especially Title III, was importantly influenced and shaped by the thinking of the Task Force. In particular, three concepts were stressed by the Task Force and they later became the philosophical base of Title III provisions.

The first concept stressed moving away from piecemeal support of small scale individual projects (e.g., Cooperative Research projects) and toward support of larger scale "model" institutions and programs where a heavier concentration of a broader and more appropriate mix of resources could be mobilized and applied to result in greater effect. This concept emanated from the recognition that the wealth of new ideas and experimental programs developed in the past ten years had not produced substantial changes in the education system. Research findings accumulated in libraries and were used, or at least mentioned, mainly only by other researchers. Innovative developments and pilot programs remained as islands of promise in the sea of tradition. Further, it was believed that neither the efforts to innovate nor the arrangements to disseminate innovative ideas and to diffuse tested new educational developments were on a scale which was adequate to the need. This concept, then, was based on the assumption that the basic problem was not so much in generating new ideas as it was in converting and adapting them into forms usable in the classroom where they were critically needed.

The second concept, that of "supplementary services" influenced the content of both Title I and Title III. It was based on the recognition of the need, particularly in big cities and also in rural school districts, for strengthened and extended services to teachers and for enrichment of the educational experiences of children. It was this concept that was largely responsible for the confusion regarding the central thrust of Title III, that caused it to be viewed as an "educational grab-bag" by many administrators, and that blurred the focus on achieving "significant" change in educational practice. One of the arguments went like this: "We cannot give each school a library, but we can put a library in the center of a number of schools, and have it serve four or five of them." Another suggestion was that a psychologist and a guidance counselor could be stationed in that same central building, and thus psychological and guidance services could be made available to children in this cluster of schools. Another person came up with the idea that audio-visual materials could be distributed from the same center. The next suggestion was that the library be next door to an art museum, so that children would have an opportunity to learn to appreciate fine art. This process continued until someone thought of a building which could house all of such supplementary services; accordingly, one framework for a "Supplementary Center" was established.

This was a constructive, even if costly, idea, so a major emphasis of Title III at the time it was passed by Congress was upon the provision of needed services not available in sufficient quality or quantity in the schools of the nation--a sort of open end to the school district budget. The first national advisory committee immediately saw that Title III appropriations could never achieve that ambitious objective, so it evolved the "innovativeness" criterion, largely from the suggestions of Nolan Estes. Thus, Projects to Advance Creativity in Education was born--PACE, an appealing and catchy acronym.

The third concept stressed moving away from providing grants to traditional educational institutions and toward providing financial support to various educational change agents (agencies and institutions) outside the traditional system. This concept was based on the view that since school systems are primarily concerned with meeting day-to-day exigencies and with keeping current operations on an even keel, this focus of attention and resources would inhibit attempts to bring about significant change or to develop and establish new programs and services well beyond the basic ones established and "tuned up" over the years. Therefore, agencies (or parts of agencies) with the potential for stimulating significant change should be chartered and supported to do so, or new and independent agencies should be established for that purpose. This thinking resulted in the concept of a second type of supplementary educational centers, those designed to bring about constructive change in schools by providing help in planning new and significantly innovative programs and services "from the outside in." However, pressures brought to bear later by the education establishment resulted in the stipulation that supplementary educational centers (of either type) could not be run by private agencies, but instead must be operated under the aegis of a local public education agency. While this provision violated Task Force concept of "outside in," it reduced anxieties concerning the church-state issue, an even more dangerous shoal.

The importance of ESEA is not only that it provided for significant stimulation toward improvement in our education system, but it also produced a model for the development of other important social legislation. It demonstrated what can be accomplished through the involvement of leading educational thinkers, lay citizen leaders, representatives of various interest groups, and political leaders in a process of bargaining and consensus building. Each title of ESEA represented a successful attempt to nullify fears about the two remaining issues--fear of Federal control, and sensitivity regarding church-state relations--while moving to accomplish a number of significant objectives. These several objectives were substantial, new, and exciting: (1) to focus Federal attention on the children of poverty, those in greatest need of education who seldom were getting what they needed; (2) to induce interaction between educators and non-educators in the quest for educational improvement and in efforts to break down built-in biases and resistances to change; (3) to create inducements for public and parochial schools to work together; (4) to attack the "fortress" school concept so that schools would serve the larger community before and after regular school hours and around the calendar; (5) to promote research and experimentation in curriculum, method, and educational evaluation; (6) to stimulate innovation in instruction and the imaginative adaptation of innovations developed elsewhere; and (7) to bring the results of all these efforts to bear upon the improvement of educational practice in the classroom, where such improvements would actually affect the behavior of teachers and children.

As Congressional hearings wore on and the new Federal aid to education bill began to take shape, a number of accommodations were made in regard to the sensitive issues of church-state relations, Federal-state-local relations, poverty, and race. Some attention already had been given to the race issue through the Civil Rights Act of 1964 which required the desegregation of all hospitals and schools receiving Federal money. The heavy muscle of the new bill was finally embodied in Title I.

This title was concerned with Compensatory Education and was designed to provide massive categorical aid to the poor and disadvantaged. It began with a two-year extension of Federal aid to impacted areas and then provided a formula of Federal grants through the states to local school districts on the basis of the number of school age children who came from poor families. Federal money, either under these basic grants or under special incentive grants, was to be spent on educational programs and facilities specifically designed to aid these educationally deprived children in both public and private schools.

> "In one fell swoop, Title I ducked an immediate fight with those Congressmen and Senators whose districts were already benefiting from 'impacted area' aid; avoided the symbolic dangers of 'general aid' by establishing 'poverty' as an educational category; established a formula that would affect 95 percent of all counties in America, but that would particularly benefit urban areas in the north and rural areas in the south (thereby cementing the two frequently warring factions of the Democratic party in Congress); provided assistance to children in parochial schools; and stipulated a major role for state departments of education in administering the grants, thereby avoiding a contretemps with the powerful chief state school officers' lobby; and all of this was to be greased with a billion dollar appropriation for the first year."[3]

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[3] Ibid.

Even more than Title I, Title II of ESEA can be viewed as a major concession to Catholic educators. In addition, it provided for mollification of those states that felt themselves treated inequitably by the poverty formula in Title I and, in addition, it dealt specifically with items near and dear to the hearts of educators and so important to administrators under budget pressures: educational "things" and instructional resource materials. Title II authorized a five-year program of grants to states for the acquisition of school library resources, textbooks, audiovisual materials, and other printed instructional material for the use of children and teachers in public and private elementary and secondary schools. Allotments were to be made to each state simply on the basis of the number of children enrolled in public and private elementary and secondary schools.

ESEA Title III made provision for "supplementary educational centers and services" employing a grant formula taking into account both school age and total population estimates of each state compared to national totals for these categories.

This title established a new style of partnership among Federal, state and local agencies. It invited state agencies into a new, even though advisory, relationship with both local districts and the Federal government. While applications for grants were to be submitted directly from the local educational agency (LEA) to the U. S. Commissioner of Education, assurance was required that the planning of programs would involve the participation of state educational agencies. It was realized that the direct relationship between the LEA and the USOE, with the state agency having only review and advisory power, would precipitate strong objections from the chief state school officers and from politicians interested in maintaining the strongest possible state prerogatives. However, this relationship apparently was advocated strongly by the Task Force and was deemed necessary by the authors of the Act as the price of assuring creativity, flexibility, and interdistrict and interstate cooperation in the vital and easily frustrated aspects of attempts to significantly modify school systems through innovation in educational practices.

As in Titles I and II, private as well as public schools were to be beneficiaries of these supplementary centers and extended services. Perhaps even more than Titles I and II, educators look to Title III to upgrade the quality of education for parochial and other nonpublic school children. In addition, the funding of Title III projects was made contingent upon significant involvement of various local educational and cultural resources: institutions of higher education, nonprofit private schools, and other nonprofit private agencies, such as libraries, museums, musical and artistic organizations, and other resources.

Upon reflection, it is interesting to note that while one of the primary emphases of the Task Force was upon stimulating significant educational innovation and producing near-revolutionary changes in the instructional processes being carried on in classrooms, and while this emphasis was generally carried over into the language of Title III, little concern about this thrust was evidenced by the educational fraternity at the time the bill was passed. Sensitivities were greatest and compromises most necessary with regard to the more political issues of "Federal control" and "national curriculum." Few people seemed to realize, however, that the hoped for and intended significance of changes in the classroom would require drastic changes in the pattern of behavior of members of all segments of the educational system. Little concern was expressed about the need for or the impact of such change on the various elements of the system, or about the strategies and mechanisms required to produce it.

Embodying much of the thinking of the Task Force, Title III was viewed by a number of its drafters and by many contributors from the USOE as the "cutting edge" of educational reform under the Act. In spite of some early emphasis on supplementary services for large urban and rural districts, the title was largely intended to support substantial creative and innovative developments in the whole process of education, rather than being dedicated to certain areas, specialties, categories, or target groups. In an attempt to restrict Title III to the critical needs of a specific target population group, an amendment to restrict Title III to poverty school districts was suggested, but it was subsequently defeated. It was argued that ESEA as a whole had placed a major thrust on improving the education of the poor and disadvantaged, particularly in Title I, and that the influence of Title III could also have a positive impact on that population segment through the improvement of educational processes in general. It was stated that to restrict Title III to poverty areas would defeat one of its broad intents: improving the quality of the entire educational system, increasing educational opportunities at all levels, and stimulating wealthier districts to demonstrate and disseminate innovations to poorer ones. Therefore the bill provided that the supplementary services and centers might be designed around a wide variety of activities: counseling, remedial instruction, vocational guidance, experimental pedogogy, the creative use of mass media, special courses in the creative arts, the development of "exemplary educational programs," and the like. The "coverage" of Title III was unique in its breadth and included almost every aspect of education including pre-school, elementary, secondary, out-of-school, adult education, and the full spectrum of subject areas.

Title III provided for 100 percent Federal grants to local educational agencies. Also, since project approval was to be competitive, the title established fifty state contests as well as one national contest, and such contests were to be based on the qualtiy of the plan embodied in the project application. However, even though the Act and the subsequent guidelines developed to administer the Act stipulated a number of criteria that such a plan must meet in order to be seriously considered for funding, little attention was given to the question of how either individual projects or the increasing stream of approved projects would actually bring about effective change throughout our education system.[4] Innovativeness of projects and the demonstration of exemplary new packages of educational programs and services were highly stressed. Considerably less emphasis was addressed to such issues as: (a) procedures for evaluating projects and their results; (b) the means of effectively disseminating information about successful projects to relevant audiences; and particularly (c) the system and processes by which successful approaches could be diffused into other schools and districts not hosting a given project.

Title IV was largely the brain child of Frances Ianni and Ralph Flynt of USOE, together with Ralph Tyler, one of America's most eminent educators and a member of Gardner's task force. It was an extension and a substantial modification of the Cooperative Research Act of 1954. Like Title III, this title for the support of educational research, development, and dissemination projects, also bypassed state agency administrative prerogatives and control. Contracts with the USOE could be entered into directly by universities, colleges, and other public or private agencies, institutions, or individuals. It was strongly believed that a wide variety of local school agencies, universities, private enterprises, and individuals would be pleased by the chance to negotiate directly with USOE even though this risked the displeasure of chief state school officers. However, as it developed, university and industry interests actually did very little to support the passage of either Title III or Title IV. Educators from nonpublic institutions pushed a good deal harder.

Title V provided funds for strengthening state departments of education. It had the political effect of mollifying the chief state school officers who were unhappy with Titles III and IV, and it was also supported by Commissioner Keppel on the philosophic grounds of "creative federalism" and on the pragmatic assumption that no Federal agency was capable of retailing grants as extensive and complicated as those being designed. Thus, Title V was a final attempt to counter the charge of Federal control. By helping to equip state agencies to assume an equal role in the partnership with the Federal agency, Title V was intended to assure governors, state legislatures, state boards and departments of education, interested Congressmen and Senators, and local administrators and teachers that the Federal Government had no intention of usurping the traditional primacy of states and localities by dictating educational policy and procedure. Even though anxieties about Federal control may have been reduced, they were certainly not eliminated.

This education bill passed the House 263 to 153. In Senate hearings and debate 99 witnesses appeared and 44 amendments were proposed and rejected. The Senate finally passed the bill intact by a vote of 73 to 18. President Johnson signed the bill into law (Public Law 89-10) on April 11, 1965, outside the one-room school house at Stonewall, Texas, where he first attended classes. He commented, on signing the bill, that members of Congress who had supported the legislation would "be remembered in history as men and women who began a new day of greatness in American society."

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[4] Miller, Richard I., Catalyst for Change: A National Study of ESEA, Title III (PACE), USOE Contract No. OEC 2-7-000074-0074, January 31, 1967.

At that time the USOE was challenged to administer a vast (the allocation for Title III alone was one hundred million dollars) and complicated new set of programs which dwarfed any single piece of legislation it had administered to date. There were valid questions about whether the Office's administrative mechanisms could meet its radically new policy responsibilities, the monumental shifts in its workload, and its sudden increase in political visibility. The President appointed a three-man committee, the Ink Committee, to make recommendations for reorganization of the Office. The Ink Committee's report called for a replacement of the many virtually autonomous bureaus with a new structure built primarily around four elements: elementary and secondary education, higher education, adult and vocational education, and research.

The question of whether Title III should be lodged in the Bureau of Research or the Bureau of Elementary and Secondary Education involved the question of whether this title should be more oriented toward planning and new developments or more toward projects concerning the operational needs of schools. Fears were expressed that if Title III were given a home in the Bureau of Research, it would become too "ivory tower" in its policy interpretations and, in its administration, too unrelated to the "real" issues affecting local school systems. Concern was expressed that these sorts of prejudices might preclude the local cooperation so vital to the success of programs seeking to stimulate effective change at local levels. It was also feared that if Title III were placed together with Title IV (Cooperative Research Projects and Regional Educational Laboratories) in the Bureau of Research, might not this combination result in undue Federal control with a small group of bureaucrats being able both to fund the original research and to disseminate and implement its findings.

On the other hand, fears also were expressed that if Title III were given to the Bureau of Elementary and Secondary Education, possibly that Bureau's alleged built-in bureaucratic structure and conservatism of its "practitioners" would restrict imagination and inventiveness so that the development of exemplary, innovative programs would suffer at the expense of extending existing types of programs and services. Also, if Title III were sharply separated from Title IV, would its basic thrust be lost, or would discontinuities result between innovation development and its demonstration and dissemination? The final decision by Commissioner Keppel placed Title III in the Bureau of Elementary and Secondary Education.

In accordance with the Act, a Title III Advisory Committee was appointed to advise the Commissioner on the development of guidelines, general regulations, and other policy matters arising in the administration of Title III; criteria for the approval of applications; and action to be taken with respect to applications received.

> "Three major emphases were stressed by the Advisory Committee: (1) an emphasis on reaching out to particular schools through the impact of new ideas, developing model programs where others could learn, creating centers on wheels and cadres of rotating consultants; (2) an emphasis away from extending present services (an initial and costly--and therefore impossible--thrust of the Task Force) and toward finding new ways of using existing facilities, personnel, and resources, a stress on quality rather than quantity of services, emphasizing planning rather than actual construction and purchase of materials, and a stress on the basic need to create an awareness of needs; and (3) an emphasis on major multipurpose high cost visible projects rather than many single purpose broadly scattered low cost projects. However, these Advisory Committee emphases were tempered in continuing negotiations and bargaining with local and state school officials. The resulting regulations stressed both "add-on" services and exemplary programs; and although resources tended to be concentrated in high quality, high cost projects, consideration was given to single purpose, lower cost projects to allow more districts to have a share in the program. With these compromises built in, the final drafting of the guidelines was completed, and 40,000 copies were mailed to state and local education agencies on October 8, 1966."[5]

For the first three years of Title III, the USOE pushed "innovation" as the basic element of its strategy for educational change. The conference in Hawaii, (the location of which generated considerable backlash) co-sponsored by the Kettering Foundation and Title III, stressed the influence of novelty and the desirability of either inventing something new or creating colorful adaptations of another's more or less developed idea. Later, after some agonizing reappraisals, Nolan Estes apparently saw that Title III was not producing as many tested and transferrable educational developments as had been expected. Thus, in January of this year he appointed Lee Wickline chairman of an Inter-Departmental Task Force to see what could be done to focus Title III money upon "the most pressing problems of our time." The publication of the report of the National Advisory Commission on Civil Disorders (the "Kerner Report") further reinforced the need for a significant change of direction in the administration of Title III.

In the meantime, the establishment (AASA, NEA, and the chief state school officers) was fighting for the administration of Title III to be turned over to the states. This effort was successful; and the amendments to Title III, transferring administrative responsibility to the states, further stipulated that the money be spent upon their most pressing problems. The general recognition of the problems of the cities, the imperative requirement for priority-setting mechanisms, and the need for more effective evaluation of projects and their effects were reflected in the regulations for Title III which were developed by the Division of Plans and Supplementary Centers. The complete model of the process of educational reform is not built yet, but one can see in the current Title III regulations a recognition of the need for the performance of the following functions: inquiry, development, evaluation, and dissemination. These functions correspond closely to several of the stages in the educational change process as described by a number of researchers. The text of the report summarizes important elements of this literature and describes the unique and valuable role which the Title III PACE Centers can play in supporting educational change.

APPENDIX C

MISSION AND FUNCTIONS OF PACE CENTERS IN CALIFORNIA

From the iterative analyses described in Appendix A and in light of the roles which various agencies appear to be fulfilling to a greater or lesser degree in the several stages of the educational change process, we developed a restatement of the general mission of the PACE Centers in California: THE MISSION OF REGIONAL PACE CENTERS IS TO STIMULATE AND ASSIST IN PLANNING FOR AND IN THE DIFFUSION OF SIGNIFICANT CHANGE IN EDUCATIONAL PRACTICE WHICH IS RESPONSIVE TO IMPORTANT STUDENT NEEDS.

This mission statement and the client-oriented functions and organizational maintenance functions (listed below) of the PACE Centers are used as a basis for discussing, in Chapter IV, the evaluation of the 21 PACE Centers.

From the evaluations of particular strengths and weaknesses of PACE Centers in their responses to requirements of their constituent districts, we developed a detailed list of functions that appear to be expected of PACE Centers. We derived these expectations from a synthesis of the intent and spirit of ESEA Title III together with expressions of client requirements. These defined functional requirements are presented below:

Client-Oriented Functions

1. Inform constituents of the purpose of ESEA Title III, the mission of the Center, and the range of services available from Center staff and *ad hoc* consultants
    a. continuously appraise constituents' understanding of this information
    b. take appropriate steps to correct any discovered misunderstandings
2. Provide for the assessment of educational needs in the area served
    a. significantly involve representative elements of the community in this assessment
    b. identify important problems and opportunities, i.e., characterize discrepancies between "what is" and "what ought to be" with regard to the educational, social, and cultural development of learners in the area
    c. define the pattern (location) of needs by degree of intensity of need

   d. depict the characteristics of those learners who manifest the needs

   e. analyze the etiology of discovered needs and identify probable causal factors

   f. communicate results of needs assessments to all affected and interested parties

   g. assist representative elements of the community in assigning priorities to identified needs

3. Thoroughly investigate what has been done elsewhere in coping with those kinds of needs (type or area of need, intensity, characteristics of learners, and etiology) assigned high priority by the community

   identify approaches (or elements of approaches--methods, tools, philosophies, materials, techniques--in various possible combinations) likely to be most effective in meeting identified and analyzed needs

4. Determine the capabilities and resources needed to effect the adaptation and adoption of possible "solutions" to high priority needs, involving resource persons and community representatives where appropriate and possible

5. Assist community representatives in assessing and inventorying the nature and extent of capabilities and resources in and available to the community in its efforts to modify and/or adopt possible solutions to meet high priority needs

6. Organize discussions among educators, community leaders and other resource persons to review developed information and plan ways of utilizing available resources in meeting the high priority needs of learners in the most effective manner

   a. stimulate the development of a climate in the community which will facilitate the study, evaluation, and adoption of those educational changes which will best meet identified needs of the learner

   b. obtain agreement on what approach(es) should be applied to meet which priority need(s) by the most logical agency using what resources in cooperation with what other groups and agencies

7. Provide for supplying continuing support and necessary technical knowledge to agencies striving to develop innovative and/or exemplary educational programs and projects to test and demonstrate the effectiveness of likely solutions to priority problems

a. assist in program and project planning

b. assemble an inventory of appropriate outside consultants and arrange for such special assistance as needed

c. provide guidance and assistance in writing proposals

   (1) relate learner need(s) addressed by proposed projects to state and national priorities

   (2) assist in "packaging" attributes of various state and Federal programs in multifaceted projects so as to deal comprehensively and most effectively with identified needs, and toward the end that support from some sources may be continued even if support from other sources is not forthcoming

   (3) assist the proposing agency in capitalizing on what has been discovered elsewhere

   (4) suggest features of proposal style, format, content and procedures most likely to be favored by proposal reviewers and approval agencies

   (5) encourage and assist in the development of "contingency plans" for the implementation and support of projects in case they may be turned down by the funding agency (agencies) addressed

d. assist proposing agency to insure:

   (1) appropriate involvement of the community in the planning and implementation of the project

   (2) effective management of the project (including staffing and training)

   (3) that provisions are made for appropriate evaluation of the management and the results of the project

   (4) that provisions are made for effective demonstration and dissemination of information about the project and its results

   (5) that provisions are made to continue the program in the event of positive evaluation results

e. upon request, review completed proposals and make recommendations to the approval agency (agencies)

f. arrange for Center staff to participate in visiting teams for the purpose of evaluating ongoing projects in the service areas of other PACE Centers

8. Assist districts which are not importantly involved in ongoing demonstration projects, but which have priority learner needs similar to those treated by a given project, in investigating the feasibility of adopting demonstrated solutions to those needs

   a. focus such efforts to effect diffusion of tested solutions primarily upon school systems relatively prone (for whatever reasons) to innovation adoption

   b. through arrangements with other Centers, assist districts from other parts of the state in investigating locally demonstrated solutions

   c. arrange for workshops in districts with successfully operating projects so that participants from other districts or other schools in the same district can become more knowledgeable and involved

The processes that Centers must go through in order to be able to meet the needs of clients are called organizational maintenance functions. Our analyses suggest that Centers should carry out the organizational maintenance functions listed below:

Organizational Maintenance Functions of the Centers

1. Identify and fulfill needed change agent roles in the area served by the Center and in ways appreciated by the community and consistent with the spirit of ESEA Title III

   a. determine the nature of the change agent roles and functions required in the Center's service area to complement and supplement existing roles and capacities

   b. formulate a strategy for stimulating constructive change in and among local educational agencies

   c. establish policy by board action which defines the role of the Center, its primary functions, the staff capabilities required, and the most important issues to be addressed--in the context of Federal and state laws and guidelines related to Title III

   d. adopt and practice management methods and administrative procedures which are consonant with board policy and support the implementation of the Center's strategy for bringing about constructive educational change

      (1) insure that appropriate secretarial help, physical facilities and means of transportation and communication are provided for the support of staff work

      (2) establish salary schedules, staff selection and evaluation processes, working conditions, and other personnel practices which will assure the competence of Center staff and adequate staff continuity

   e. work with constituents so as to become known as helpful and effective planning consultants

    (1) serve as a source of information and of analytical and planning skills useful in mounting coordinated and significant attacks upon important learner needs

    (2) match staff and outside consultant characteristics with the unique nature of client needs and characteristics

2. Periodically evaluate the appropriateness of the Center's defined role, its strategy, the effectiveness and costs of its current functions, the array of services offered (vs. those utilized), the allocation of time and effort, and the appropriateness of the staffing pattern of the Center

3. Modify the Center's role, strategy, functions, budget, services offered, staffing pattern, and allocation of time and effort in light of evaluative information regarding current needs in the service area, the existence and capabilities of other resource agencies, and new state and Federal priorities and guidelines

4. Exchange information among Centers and with other appropriate agencies regarding newly developed techniques, results of literature searches, useful resource persons and agencies, results of project planning efforts, project proposals (including those rejected, together with reasons why), the progress and results of operational projects, the existence and availability of unique or highly developed skills among Center staff, new approaches to project evaluation, information dissemination, and the stimulation of diffusion of demonstrated solutions to other districts, etc., to the end that the fruits of the efforts of all Centers can be made more widely available

5. Cooperate with other agencies and institutions in planning ways in which the roles of each can be differentiated and functional linkages established among them so as to facilitate efficient operation of a true "system" of education

    a. recognize and accommodate the interdependence and exploit the complementarity among educational R & D centers, institutions of higher education, regional educational laboratories, the state department of education, intermediate units, regional educational data processing centers, school districts and supplementary educational centers in carrying out the process of educational development and change

    b. with the guidance and support of the state department of education and appropriately involving intermediate unit and school district personnel, assist in arranging projects and activities to facilitate the diffusion (dissemination, adaptation, and adoption) of demonstrated solutions to important learner needs

c. utilizing appropriate resources of the state department, intermediate units, teacher training institutions, outside consultants, and professional organizations, focus the diffusion efforts primarily upon districts characterized by openness to change and by learner needs similar to those successfully met by demonstrated solutions

d. capitalize upon visits of resource persons to the Center, and to agencies planning or operating projects, for inservice training and development of Center personnel

APPENDIX D

CHAPTER ONE, "CONCLUSIONS AND RECOMMENDATIONS" AS QUOTED FROM THE STUDY REPORT OF THE COMMITTEE OF TEN[1]

Conclusions

1. It is essential in California that there be an intermediate unit operating between the individual school districts and the State Department of Education. In many instances, it is the function of the intermediate unit to carry out the state's role and responsibility in public education. Its major function, however, is to serve as a coordinating and regional service agency for the local districts.

2. In this time of rapid technological, social and economic change, there is need in the overall administrative structure of public education for a unit with the responsibility and ability to cope with new problems and implement new programs. A dynamic, flexible intermediate unit that is task-force oriented can respond best to the workload demands created by these conditions. The State Department of Education is too remote and districts are too involved to function adequately without the services such a unit can provide.

3. The coordination of education among school districts is and will continue to be the most important responsibility of the intermediate unit. District superintendents have pointed out that there is an increasing need for cooperation among school districts, regardless of size, in seeking solutions to common problems, and that the intermediate unit is the most logical catalyst.

4. In providing coordinative services, the county office assumes a leadership role in program planning, development, and evaluation; in the preparation and distribution of publications, including courses of study and teacher guides; in conducting inservice education programs; and in spearheading research, experimentation, and follow-up studies.

5. The intermediate unit should provide a level of leadership, support, and services to all districts, regardless of size.

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[1] The Future of the Intermediate Unit in California, submitted by "The Committee of Ten," sponsored by California Association of County Superintendents of Schools and County Boards of Education Section of California School Boards Association, September, 1966.

6. The coordination of education activities with community and governmental agencies is an emerging and essential role of the intermediate unit.

7. School districts which have outgrown the present legal direct-service size need more service from the county office.

8. The intermediate unit can prevent duplication of services.

9. Single-unified-district counties should receive county service fund services through the office of a neighboring county.

10. The intermediate unit budget should be under the control of the county board of education and not subject to approval by the State Department of Education.

11. No definite pattern can be applied throughout the state in determining which specific functions or services belong to the school district. When a district is unable to meet adequately the needs of its children because of sparsity of population, large concentrations of culturally deprived children, or other fundamental constraints, special services may have to be provided by the intermediate unit.

12. The operation of school programs is normally a role and function of school districts. This principle applies in special programs as well as in the normal school program. It is appropriate for the county superintendent of schools to be given the responsibility to see that special programs are provided. There will remain situations in which the county superintendent of schools will need to operate one or more special programs.

13. A statewide network of educational data processing centers is needed to serve the needs of school districts of the state. State funds must be provided to bear a portion of the developmental and operational costs.

14. Cooperative activities performed on a regional basis are providing services in many areas of the state that could not be possible on a single-county basis. This practice, developed by the California Association of County Superintendents of Schools with the approval and support of the State Department of Education, should be encouraged.

15. The growing number and variety of Federal programs have required staff members of intermediate offices to divert their attention from ongoing responsibilities in order to assist school districts in processing applications and implementing programs. These new problems have been met at the expense of other important assignments and without extra funds to the county office.

16. It is important that the State Department of Education and the intermediate unit strengthen one another in every way possible. The intermediate unit should strengthen the State Department of Education by carrying out laws enacted by the State Legislature and enforcing rules and regulations under Title V of the Administrative Code. While, legally, the intermediate unit is an enforcement agency, it must be able to exercise flexibility in working with school districts on local needs and problems.

Recommendations

1. It is recommended:

   1.1 That each of the six regions of the state submit to the Executive Board of the County Boards of Education Section of the California School Boards Association and the Executive Board of the California Association of County Superintendents of Schools, by July 1, 1967, a plan for their region which will best serve the children of California by providing the most dynamic and effective intermediate unit arrangement.

   1.2 That pilot programs be conducted which unite, operationally, county school service fund programs into an intermediate unit which encompasses more than one county.

   1.3 That the law be changed to permit two or more counties to have one intermediate unit board of education which would be elected from the entire area.

   1.4 That the intermediate unit superintendent be selected by the intermediate board of education to serve the area.

2. It is recommended that a panel of experts from outside the county school office be employed to develop and recommend a formula for distribution of county school service funds, and that such a formula be enacted into law.

3. It is recommended that there be no penalty for carrying over a reasonable amount, not to exceed 20 percent, of the service fund budget in the year-end balance of the county school service fund budget.

4. The formula-in-law for apportioning county school service funds should make it financially possible to serve all districts according to their needs.

5. The Committee of Ten urges continued use of foundation funds in financing significant innovations in education.

6. To make the intermediate board of education more responsible and responsive to local needs, and to enable it to play a stronger

role in the state school system, it is recommended:

6.1 That the intermediate unit governing board be continued as an elective board.

6.2 That the intermediate unit governing board have full authority for budget approval.

6.3 That the intermediate unit governing board possess fiscal independence similar to a district governing board.

6.4 That the intermediate unit governing board have the authority to appoint the superintendent and set his salary.

7. Responsibility for approval of courses of study at all levels should be placed with the intermediate unit board of education. The California Education Code should be revised accordingly.

8. The Committee of Ten recommends continuing study and development of related educational data processing centers to serve the state.

9. Cooperative activities should be administered as though the areas being served were a single unit. The responsibility for administration should rest with one office, and all involved counties should perform policy-making and facilitating roles. This type of arrangement should result in a uniform service throughout the cooperating area.

10. The following recommendations pertain to areas in which the intermediate unit of the future will be in a position to perform unique functions. It is recommended:

    10.1 That the intermediate unit be a planning office, capable of identifying emerging and changing demands of our society.

    10.2 That the intermediate unit be developed as the quality control center for the state system, serving as the major renewal unit for controlling obsolescence of personnel, material, and equipment.

    10.3 That the intermediate unit be assigned the responsibility for coordinating the identification of problems needing research, and the resources with which to attack the problems.

11. The state level of education and the intermediate unit should each work to strengthen the unit next closest to the people and should perform services for that unit when needed and requested.

APPENDIX E

TABULAR SUMMARIES OF QUESTIONNAIRE INFORMATION

General Information About the PACE Centers

	1 Butte	2 San Francisco	3 Contra Costa	4 Kern	5 Sacramento	6 Fresno	7 San Joaquin	8 Los Angeles	9 Los Angeles City	10 Tulare	11 Santa Clara	12 Santa Barbara	13 San Mateo	14 Riverside	15 Orange	16 Napa	17 Monterey	18 Humboldt	19 Alameda	20 San Diego	21 San Bernardino
Major Description of Project																					
Innovative	x	x	x			x	x				x	x	x	x	x		x	x	x	x	x
Exemplary				x	x			x	x							x					
Adaptive										x											
Type of Activities																					
Planning of Program	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Planning of Construction																					
Conducting Pilot Activities	x	x			x	x		x		x						x					
Operation of Program			x		x	x	x		x	x	x					x			x		
Constructing																					
Remodeling																					
Project Evaluation															x						

Note: In all charts that follow, each Center will be referred to by the number indicated on this chart. Order was chosen at random.

Needs Assessment

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Methods of Assessing Needs																						
Questionnaires	19	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	
Opinion inventories	14			x	x	x	x	x	x	x	x	x	x		x		x	x				x
Meetings	20	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Committees were formed	13	x	x	x	x	x				x		x	x		x	x				x	x	x
Research-evaluation studies	13	x	x		x	x	x			x	x	x	x		x	x	x			x		
Interviews	18	x	x	x	x	x	x	x	x	x		x	x	x	x	x		x	x	x	x	
Other																						
Conferences	1											x										
Pilot and follow-up study	1														x							
Student performance studies	2	x									x											
Formation of steering or advisory committees	1															x						
Regional educational laboratories	1						x															
Random sampling	1													x								
Federal or state department of education	4						x							x						x	x	
Agency data review	1	x																				
Colleges or universities in region	2						x							x								
Sociological study	1																					x

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Butte	San Francisco	Contra Costa	Kern	Sacramento	Fresno	San Joaquin	Los Angeles	Los Angeles City	Tulare	Santa Clara	Santa Barbara	San Mateo	Riverside	Orange	Napa	Monterey	Humboldt	Alameda	San Diego	San Bernardino

Needs Assessment (Continued)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		14	14	13	15	18	15	4	5	14	12	14	14	11	16	17	12	7	14	15	12	13
Decision-making regarding needs																						
Board of Directors of Center	(19)	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x
Advisory committees	(21)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
County board of education	(12)	x		x		x	x					x	x	x	x	x			x	x		x
County superintendent	(18)	x	x	x	x	x	x		x		x	x	x	x	x	x	x		x	x	x	x
District superintendent and county office personnel	(18)	x		x	x	x	x		x		x	x	x	x	x	x	x	x	x	x	x	x
School principal	(20)	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Teachers	(20)	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
State Department of Education personnel	(15)	x	x		x	x	x				x	x	x		x	x	x		x	x	x	x
University and college personnel	(17)	x	x	x	x	x	x			x	x	x	x	x	x	x			x	x	x	x
Consultants	(16)	x			x	x	x	x	x	x	x	x	x		x	x			x	x	x	x
Students	(15)		x	x	x	x				x	x	x	x	x	x	x	x	x	x	x		
Parents	(14)	x	x	x	x		x			x	x	x	x	x	x	x	x		x			
Citizen groups	(15)	x		x	x	x	x			x		x		x	x		x	x	x	x	x	x
Professional organizations	(12)	x		x	x		x			x		x	x		x				x	x	x	x
Nonparticipating districts	(10)	x	x	x	x	x				x					x	x	x			x		
Individual citizens	(1)							x														
Regional educational laboratories	(6)		x			x				x					x						x	x
Regional data processing	(6)				x		x				x		x			x	x					
State department of education	(1)						x															
Others																						
Public Welfare Department			x																			
Chamber of Commerce			x																			
Human relations			x																			
Executive committee						x																
Need Assessment Board						x																
Data Processing Center						x																
Nonprofit private and parochial schools						x																
L. A. City Board of Education									x													
L. A. City Superintendent and staff									x													
Citizens																x						
County planning department																x						
Business and industry																					x	

Identified Needs and Priorities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Cultural Arts		1		9	4								7					4		4	1
Basic Communication Skills																					
Remedial reading		2	1			1														14	
Communication skills									x		3		5			6			2		
Upgrade teachers in developmental reading		8																			
Increased programs for preschool and early elementary	1			8																5	
Upgrade Teacher Skills																					
Quality of teacher training													8	1							2
Teacher skills--atypical children		4				3															
Inservice training programs	6			3		5								3		3					
Groups with Learning Difficulties	2			4	5												1				
Day center for emotionally disturbed		5	5		8															9	
Special classes for deaf and blind		6																			
Programs for bilingual students		9		1	7	4													3		
Gifted children			3	12							3									6	
Learning progress at critical points	4																				
Community/parent Involvement and Utilization of Community Resources		3										8	3							8	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Butte	San Francisco	Contra Costa	Kern	Sacramento	Fresno	San Joaquin	Los Angeles	Los Angeles City	Tulare	Santa Clara	Santa Barbara	San Mateo	Riverside	Orange	Napa	Monterey	Humboldt	Alameda	San Diego	San Bernardino

Identified Needs and Priorities (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Adult education				5			4						9							24	
Use of community resources					1																
Extension of student experience beyond classroom													1								
Conservation education			4																		
Planning and Research																					
Improve research and planning														5							
Assist districts in planning															2						
Develop Curriculum and Methods Relevant to Students and Individual Self-Concept																					
Improvement of self-concept					2							1								2	3
Self direction for student					6		5								1				1		
Improvement of curriculum												6	6	4					3		
Value knowledge															3						
Counseling and guidance				2			3														6
Educational development for South East San Francisco		10																			
Development of good study habits															4						
Health Education and Treatment of Social Problems																					
Family life and health education			2								2	3			5			3	4	17	4
Drug abuse											1	7						5		21	

Identified Needs and Priorities (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Home economics and social studies																2				7	
Improve Administrative Organization																					
Upgrade administrative skills		7		10																10	
Job Entry Skills	3		6	7	3	2	2		x	2	4	2	4			1		2	1	1	
Supportive Educational Services																					
Instructional media				6											7						
Supportive educational services	5											5	10								

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Butte	San Francisco	Contra Costa	Kern	Sacramento	Fresno	San Joaquin	Los Angeles	Los Angeles City	Tulare	Santa Clara	Santa Barbara	San Mateo	Riverside	Orange	Napa	Monterey	Humboldt	Alameda	San Diego	San Bernardino

Objectives of Centers

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Criteria for Determining Priorities (Weighted)																						
National priorities in May, 1967, Manual for Project Grants		6	1	4	5	2	6	2	1	1	3		2	2	1	8	2	6	1	3	1	3
Priorities specified by Calif State Dept of Educ		4	3	1	4	1	5	1		2	1		7	3	5	7	1	4	2	2	3	6
Needs as assessed by center's assessment program		1	2	3	1	3	1			5	5	x	3	6	2	1		1	5	1	2	2
Pressure from individual districts		7	4	5	2	6			3				1	5	7	5		7		7	6	5
Concerns of Board of Directors		3	5	2	3	4	2	4			2		4	4	3	2	4	3	4	5	4	4
Concerns of Advisory Committee		2	6	6	7	5	3	5		3			6	7	4	4		4		6	7	7
Judgments of staff		5	7	7	6	7	4	3	2	4	4	x	5	1	6	3	3	2	3	4	5	1
Other:																						
Concerns of Participating Districts												x										
National concerns in public press												x										
County superintendents of schools																6						
Decision-making in formulating priorities		(Significant influence = xx; Some influence = x)																				
Board of Directors	(16 xx)	xx		xx	xx	xx	xx	xx			xx	xx	xx	xx	x	xx	xx	xx	xx	x	xx	xx
Advisory committees	(9 xx)	x	xx	x		xx	x	xx	xx	xx	xx	x	xx		x	xx	x	x	xx	x	x	
County Board of Education	(1 xx)	x		x			x		x				xx			x						x
County Supt./staff	(13 xx)	xx	xx	xx	xx	x	xx		x	xx	x	x	xx	xx	x	xx	x	xx	xx	x	xx	xx
District superintendent	(5 xx)	x			x	x	xx	x	x	x	x	xx	x	x	xx	x	x	xx		x	xx	x
School principal	(2 xx)	x	xx		x	x	x		x				x	xx	x		x					x
Teachers		x	x		x	x	x		x				x		x	x		x				
St. Dept. of Education	(5 xx)	x	xx	x	xx	x	x			x	x	x	x		xx	xx			xx	x	x	x
University and colleges	(1 xx)	x		x		x	x		x	xx	x	x	x	x	x	x		x		x	x	x
Hired consultants	(1 xx)	x					x			xx	x		x		x	x		x		x		
Students					x	x	x						x			x				x		
Parents					x	x	x						x	x	x	x		x				
Civic groups and clubs	(1 xx)					x	x					x	x		xx	x		x		x		
Professional organ		x								x			x	x	x					x		
Nonparticipating districts					x							x			x					x		
Regional educational labs		x					x			x			x							x		
Needs assessment board	(1 xx)					xx																

Evaluation Procedures of Activities of Center

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Method																					
Attitude scales														x							
Opinion inventories						x	x	x		x	x	x		x	NA	x	x		x		
Questionnaires			x				x	x		x	x	x		x		x	x		x	x	
Group meetings	x	x	x			x	x	x		x	x	x		x		x			x	x	x
Analysis of achievement scores														x					x		
Interviews	x	x	x			x			x	x	x	x		x					x	x	x
Other:																					
Consultants	x												x						x		
Development of materials	x															x					
Success of PACE projects	x																	x	x	x	
Executive Board			x																		
County Board of Education			x			x															
Decision-making Group in Evaluation																					
Board of Directors	x		x		x	x	x			x	x	x	x	x		x	x	x	x	x	x
Advisory Committee		x			x	x	x	x	x	x	x	x		x		x	x			x	x
County Board of Education			x			x		x				x		x							
County Superintendent/Staff	x	x	x			x	x	x		x	x	x	x	x		x	x		x	x	x
District Superintendent	x		x			x	x	x	x	x		x	x	x		x	x			x	x
School principals	x		x			x	x	x		x	x	x		x		x			x		x
Teachers	x		x			x	x	x		x	x	x		x		x			x		
State department of education	x	x	x			x		x	x		x	x		x					x	x	x
Universities and colleges			x			x		x	x		x	x		x					x	x	x
Hired consultants	x				x	x		x	x	x	x	x	x	x		x	x		x	x	
Students														x							
Parents						x	x	x			x	x		x		x	x				
Citizen groups						x					x			x							
Professional organization						x							x	x							x
School districts						x		x								x					
Regional education labs				x					x												
Regional data processing centers						x						x									
Task forces						x		x													
Frequency of evaluation procedures																					
Continuous and ongoing	x	x		x		x	x	x		x		x		x		x		x	x	x	x
Periodic basis		x	x		x	x			x		x	x	x								
No of times per year		2	2						1		1										
Seldom, if ever, conducted formally								8													

NA = Not Answered

Decision-Making Role Outside Center
in Planning and Implementation of Activities

	Influence (Total number of centers)			
	None	Little	Considerable	High Degree
Board of Directors	2		9	8
Advisory Committee		5	7	4
County Board of Education	1	10		2
County Superintendent/Staff	1		8	9
District Superintendent		2	11	5
School Principal		9	9	
Teachers		12	4	2
State Department of Education		9	9	
University and College	1	7	6	2
Regional Data Processing	7	5	1	
Hired Consultants	1	6	8	3
Students	2	10	1	
Parents		11	2	
Citizens Groups	1	10	3	
Professional Organizations	1	12	3	
Nonparticipating Districts	4	9	3	
Regional Educational Labs	2	11	2	

Personnel

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
DIRECTOR Salary	17,378	21,620	18,000	16,000	20,000	18,624	17,300	20,124	23,256	16,463	18,500	17,630	18-21,000	part-time	17,250	18,500	16,000	15,800	17,364	16,683	18,400
How determined:																					
Pre-established salary schedule				x					x			x			x					x	x
Section 201 of S. F. school district		x																			
Salary schedule of applicant agent	x																				
Assistant superintendent level			x				x														
Board of Directors					x																
County Supt. Schools salary schedule					x			x		x		x	x				x				
Individual negotiations											x					x		x	x		
Hiring Decision:																					
Board of Directors	x			x	x		x			x	x	x		x			x	x	x	x	x
County Board of Education			x	x				x	x			x	x	x						x	
County Superintendent		x	x	x	x		x	x						x	x	x			x	x	x
Project director					x							x			x		x				
District Board of Education		x																			
District Personnel Division		x																			
District Coordinator/St.Fed. projects		x																			
County Supt. Council			x																		
Executive Committee					x																
Superintendent of Schools									x												
Highest Academic Degree:																					
M.A.		x			x					x									x	x	
Certificate--Adv study--M.A. + 30			x				x		x			x						x			x
Doctorate	x			x		x		x						x		x	x				
Post-doctoral								x			x		x		x						

Personnel (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
ASSISTANT DIRECTOR (how many)	2	1	3	2	4	2	1	2	1	1	1	1	3	1	2	4	2	1	1	2	1
Salary (average)	14,500	19,780	15,600	14,500	16,300	16,400	16,450	18,000	16,740	16,400	16,100	13,300	16,000	17,115	15,506	15,675	17,000	11,800	14,976	14,940	17,789
How determined:																					
Sal. sched. for certif. personnel	x																				
Section 5.01 sal. sched. S.F. schools		x																			
Coordinators sal. sched. + 10%			x																		
Pre-established sal. sched.				x	x				x			x			x				x	x	x
County supt. sal. sched.						x	x	x		x	x		x	x		x	x	x			
Hiring Decision: (xx = hiring; x = approval)																					
Board of Directors	xx			x		xx	xx			x	x						x	x	x	x	x
County Board of Education		xx	x	x				xx				x								x	
County Superintendent		x	xx	x		xx	xx	xx						x	x	x			x	x	xx
Project Director	x	xx		xx		xx	xx	xx	xx	x	x	x	x	x	x	x	x	x	xx	xx	
Local School System									xx												
Personnel Division		xx																			
Coordinator of St/Fed projects		xx																			
Screening Committee					xx										x						
Superintendent's office									xx						x						
Highest Academic Degree:																					
Grad school--no degree													x								
M.A.	x	x	x	x	x		x	x		x		x	x			x	x		x		
M.A. + 30	x			x	x	x		x	x					x						x	x
Doctorate								x			x			x		x				x	
Post-doctoral								x													

Personnel (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
STAFF REPS OR CONSULTANTS (how many)	1	2	1	1		1	2	6	3	2	2	1	1	2			2	1	2	1	2
Salary	13,504	11,000	12,000	14,350		15,844	13,000	14,700	18,000	14,710	15,000	14,190	12,300	14,000			13,500	11,800	14,976	14,340	16,877
How determined:																					
Sal sched. of applic. agency	x																				
Section 7.01 of S.F. District		x																			
Pre-established sal. sched.			x	x					x	x									x	x	x
County Supt. Schools						x	x	x			x		x	x			x				
Individual negotiations												x						x			
Hiring Decision: (xx = hiring; x = approval)																					
Board of Directors	x			x		xx	xx			x	x	x					x	x	x	x	
County Board of Education		x	x	x				x				x								x	
County supt. sal. sched.		x	xx	x		xx	xx	x	x			x		x			x		x	x	xx
Project director	xx	xx		xx		xx	xx	x		x	x	x	x	x				x	xx	xx	
Local school system									x												
Personnel division--school district		xx																			
Coordinator St/Fed projects		xx																			
Screening committee					xx																
Highest Academic Degree:																					
B.A.		x	x			x															
Grad school--no degree			x	x									x								
M.A.	x						x	x	x	x	x	x					x		x	x	x
M.A. + 30							x	x			x							x			
Doctorate								x											x		x
Post-doctoral														x							
Number Classified Personnel	3	3	5	2	4	4	3	8	4	3	3	2	3	2	2	5	4	1	4	3	2

Budget of Centers

	1 Butte	2 San Francisco	3 Contra Costa	4 Kern	5 Sacramento	6 Fresno	7 San Joaquin	8 Los Angeles	9 Los Angeles City	10 Tulare	11 Santa Clara	12 Santa Barbara	13 San Mateo	14 Riverside	15 Orange	16 Napa	17 Monterey	18 Humboldt	19 Alameda	20 San Diego	21 San Bernardino
Budget Allotment: (Figures in percentages)																					
Planning activities	35	40	15	90	55	28	45	30	23	35	NA	20	NA	53	14	30	NA	15	40	30	40
Carrying out activities to meet needs	50	20	65	5	40	37	45	60	61	55		20		32	13	45		75	30	50	55
Day-to-day operation	15	40	20	5	5	35	10	10	16	10		60		15	45	24		10	30	20	5
Formulation of Budget:																					
Planning center staff		x	x	x	x	x	x	x	x	x		x		x	x	x		x	x	x	x
Superintendent executive staff		x	x					x													
Fiscal office		x							x												
Coordinator St/Fed projects		x																			
Center director	x				x	x	x			x				x	x					x	x
Applicant agent	x																				
County Board of Education		x							x			x									
Executive Committee				x	x							x	x					x		x	
Executive Secretary					x																
County Superintendent						x									x				x		
St/Fed Agencies							x														
County Governing Board														x	x						
Curriculum Coordinator														x							
Time Spent Preparing Budget (in man-days)	5	3	5	8	5	5	50	5	6	10	3	5		7	2	5		10	30	5	
Criteria in Budget: (ranked)																					
Last year budget	2	2	2	4	2	2		2	4	2	2	2		2	2	3			2	2	2
What Feds will grant	3	4	4	3	3				1	3	4	4			4	2			3	3	4
What State will grant	4	3	3	2	4				3	3	1	3			3	4			4	4	3
Proposed objectives and activities	1	1	1	1	1	1	1	1	2	1	3	1		1	1	1		1	1	1	1

NA = Not Answered

Cooperating Community and Professional Agencies

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Total	65	65	28	98				26	41	20	29	31		16	23	41	13	20		127	
Number--Members of Board	2	12	20	2						3	11			2	6			4	9	2	5
Cultural groups				1							1							1			
Science and medicine														1	4			2			
Academic	2	5	8	1						1	5								5	2	5
Religious		2								1	1								1		
Social service			1																		
News media		3									1								1		
Labor		1																			
Private enterprise															1				1		
Community organization			5							1				1	1			1	1		
Number--Members of Advisory Committee	15	56	20	6	2	11		10	39	17	14	13		29	21	25	11	8	19	10	78
Cultural groups		17				3			5			2		6	1	2	1	1		1	1
Science and medicine	1	1										2			2			3		2	
Academic	6	23	8	1	2	2		4	14	2	3	2		8	5	5	1	2	9	3	65
Religious		3						4	6	1	1	2		3		3			1		6
Social service			1	1											1				2		
News media		2				1			2					1		1					
Local and state agencies	4	2	6	3		3			3	4	6	3		6	2	4	5			1	2
Labor	1								1			1				1					
Private enterprise									1		3	1			1		1		4		3
Community organization	3	8	5	1		2		2	8	4	2			5	8	9	3	2	3	3	1
Number--Reciprocal Working Relationships	44	60	5	96	18	33	11	10	8	11	4	13	11	9	2	11	1	17	22	5	23
Cultural groups		16		3	1	4								2				2		2	
Science and medicine	2	1		15	1	3												2			
Academic	21	26	1	9	7	7	5	4	6	2	1	7	3	11	1	3	1	3	3	1	22
Religious		3		6						1		2		1		1			4		1
Social service	1			30																	
News media	3	3				1								2		1					
Local and state agencies	5	2	3	5	3	7	4	5		4	2	2	1	1		4		1	1	1	
Labor		1				2							1			1					
Private enterprise	2		1		2				1		1	2	3					1	5	1	
Community organization	10	8		28	2	9	2	1	1	4			3	2	1	1		8	9		

Cooperating Community and Professional Agencies (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Number--Involved in Needs Assessment	23	48	20	8	10	11		3	14	4	1	9		32		8		9	26	19	75
Cultural groups		10		1	2	1			1					2				2		4	1
Science and medicine	1	1												1				1	1	1	
Academic	9	23	8		5	6		1	6	1		4		16		4		1	13	3	73
Religious		3						1	1	1		2		3						1	
Social services			1																		
News media	1	3				1															
Local and state agencies	5		6	5	2	2		1			1	2		4		3		1	4	3	1
Labor	1																			1	
Private enterprise									1			1		4					1	2	
Community organization	6	8	5	1	1	1			5	2				2		1		4	7	4	
Number--Involved in Evaluation Procedures	4	5	21	2	5	3		3	13	12	2	10	1	44	17	4	11	1	9	2	4
Cultural groups		1			1									2	1		1				
Academic	4	3	9		4	2		2	6	2	1	5		20	5	2	1	1	5	2	4
Religious									1	1		1		3							
Social service			1										1		2						
News media						1								4							
Local and state agencies			6	2						4	1	1		5	2	2	5		1		
Private enterprise								1	1	3		3		6			1		3		
Community organization		1	5						5	2				3	8		3				
Number--Involved in Information Dissemination	55	10	4	95	4	31		9	8	5	14	12	1	46	21	8	11	12	10		21
Cultural groups		5		3		4								7	1		1	2			
Science and medicine	3	1		15	1	3								1	2			3			
Academic	28	4	1	9	3	7		4	6	2	5	4		19	6	1	1	2	3		21
Religious				6				3				1		3		1			1		
Social services	2			30									1		2						
News media	2					1					1	1		4							
Local and state agencies	7		1	4		7				2	3	2		5	2	4	5	1	1		
Labor	1					2															
Private enterprise	3							1	1		2	4		2			1		2		
Community organization	9		2	28		9		1	1	1	3			5	8	2	3	4	3		

Cooperating Community and Professional Agencies (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Number--On Mailing List Only		2			26		90	9				16		29		3				106	69
Cultural groups		2					4					5		7		3				16	
Science and medicine					2		15					1								7	
Academic					20		12	5				4		6		6				17	69
Religious							3									2				36	
Social services							11													9	
News media												1		1		1				2	
Local and state agencies					1		13					3		8		6				1	
Labor												1				2				1	
Private enterprise					2		1	2						4		1				13	
Community organization					1		31	2				1		3		9				4	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Butte	San Francisco	Contra Costa	Kern	Sacramento	Fresno	San Joaquin	Los Angeles	Los Angeles City	Tulare	Santa Clara	Santa Barbara	San Mateo	Riverside	Orange	Napa	Monterey	Humboldt	Alameda	San Diego	San Bernardino

Board of Directors

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Number on Board	22	19	33	9	10	12	12	8		10	22	6	9	19	12	13	7	16	15	11	10
How often meet annually	4	3	12	10	3	10	11	52		12	12	6	12	3	11	12	12	2	10	12	6
Irregular meetings	2	2	2		1	2	1			2			4	1			2				
How selected:																					
Fixed representatives from set groups	x						x				x		x	x			x	x			
County board of supervisors								x													
Appointed by Executive Board			x			x				x		x							x		x
County Superintendent of Schools				x		x															
Composition of Board																					
No. men	19	17	21	9	10	8	12	5		9	29	6	6	18				12	13	11	10
No. women	3	2	12			4		3		1	4		3	1				4	2		
No. in school system	17	9	15	7	10	10	7	1		7	20	6	1	15	7	12		12	7	8	10
No. other academic institutions	4	4	2	1				1		2	3		3	1	4				4	1	
No. religious	1	2					1	2			1					1					
No. news media		3									1								1		
No. state and local agencies		1	10								2			2							
No. community organization			5			2	4	4		1	7		5	1	1			4	3	2	
No. advisory committee	3	6	4	10	11	3			6	6	1	1	1	1	1	4	3	2	2	8	
Groups Represented on Committee																					
Board of Directors	x	x		x	x	x	x			x	x	x		x	x	x		x		x	
Advisory Committee		x			x	x	x	x	x	x		x		x	x					x	x
County Board of Education	x	x			x	x		x			x	x			x						
County Superintendent/staff	x	x		x	x	x	x	x		x	x	x		x	x	x		x	x	x	
District superintendent	x	x		x	x	x	x	x		x	x	x		x	x	x		x	x	x	x
School principal	x	x		x	x	x	x	x	x	x	x	x		x		x		x	x	x	x
Teachers	x	x		x	x	x	x		x	x	x	x		x		x		x	x	x	x
State Department of Education	x			x		x			x			x		x						x	
University and college faculty	x	x		x	x	x	x	x		x	x	x		x	x			x	x	x	x
Consultants		x				x			x			x		x					x	x	
Students		x		x		x												x			
Parents		x		x	x	x	x	x	x	x		x		x		x		x			

Board of Directors (Continued)

Groups Represented on Committee (Cont.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Citizens groups	x	x		x	x	x		x	x	x		x		x	x	x		x	x	x	
Professional organization	x	x		x	x	x			x	x		x		x	x				x		x
Nonparticipating districts					x	x	x		x			x		x		x					
Regional education labs						x			x												x
Regional data processing						x															
Private-parochial schools					x																
Fed. agency offices	x				x																
Business					x	x				x	x										
State-county agencies					x																
Cultural organization					x																
Religious organization					x																
Youth organization					x																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Butte	San Francisco	Contra Costa	Kern	Sacramento	Fresno	San Joaquin	Los Angeles	Los Angeles City	Tulare	Santa Clara	Santa Barbara	San Mateo	Riverside	Orange	Napa	Monterey	Humboldt	Alameda	San Diego	San Bernardino

Dissemination of Information

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Staff:																					
Full-time certificated	x	x		x		x						x		x		x			x	x	
Part-time certificated												x				x					
Full-time classified									x					x		x					
Part-time classified								x				x					x				
Staff on ad hoc basis			x		x	x	x	x		x	x		x		x	x		x	x		x
Technique: (number per year)																					
Newlsetter		2	2		9	5	4	10	3	4	10	9	4	4		10	3	2	5	9	12
Bulletin	11			3		5	x				10						2		4	x	
Pamphlets			1			3	x		1		4	2	3				9	4	1	4	
Speeches	30		25	3		24	x	20	2	10	20	2	15			16		6	13	x	20
Conferences	5			2	3	3	x	90	1	2	6	2	15			3	1	1	1		1
Seminars	2		8	1	12		x	3		2	12	5		1			1			1	
Inservice training meetins	2					15	x	4	5	7	2	1	4	1		17	2		7		
Press releases	25		10			20	x		x		4	20	3			10	20	1	2		2
Research reports						5	x			8	6	4					1		4		
Professional journals			2								4	1					1	3	1		1
ERIC system			1				x				x	x	x	1					x		
Project planning information			1				x	x		1	10	15	2	1		14	10	1	15	x	
Evaluation results	2					4	x				1	1		2		2	2		x		
T. V. programs					4			x			1	1									
Maintain professional library			x		x		x	x			x	x	x				x	x	x	x	x
Provide research information on request	x		x	x		x		x	x	x	x	x	x	x		x	x	x	x	x	
A. V. materials							x														x

Participating Districts

	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
NUMBER STUDENTS INVOLVED		25,735	122,000	149,775	88,506	588,933	105,245	225,052	453,523	812,400	NA	286,203	124,078	100.000	131,121	336,165	142,780	NA	11,754	253,290	NA	Not answered
NATURE OF INVOLVEMENT WITH CENTER																						
Needs determination	707	164	1	19	78	67	32	18	62	1	25	21	33	21	13	27	41	22	14	21	27	1
Formulating objectives and goals	270	39	1	18	4	21	6	7	11	1	8	23	12		13	28	11	29	15	17	6	1
Advisory capacity, e.g., Board of Directors	403	35	1	19	6	44	6	22	62	1	13	34	16	2	20	30	28	34	9	10	11	
Provide facilities for activities	115	32	1	2	1	4	1	6	25	1	4	2	4	1	2	8	8	2	3	1	6	1
Help in preparation of proposals	507	4	1	17	17	23	17	21	49	1	33	18	26	8	31	16	33	11	19	10	25	1
Consultant help or inservice training	445	46	1	19	7	81	12	15	37	1	30	4	22	9	5	21	61	24	24	1	25	
Provide ideas for study and planning	506	51	1	18	52	72	10	24	48	1	14	24	16	8	37	30	19	21	30	14	16	1
Provide personnel	109	40		10	13	4	2			1		2	6	5		9	7	3	4	1	1	1
Others		15		1			20		27			33	17	12			11	37	8	15		
POTENTIAL PARTICIPANTS (NUMBER)	292	16	1	16	3	54	24	27	6	1	5	1	3		46		47	19	7	2	15	
REASONS FOR NOT PARTICIPATING																						
No time												1										
No wish to participate in Fed aid		1	1		3				6		5									1		
Elected not to participate		12																	1			
Lack contact		2									2											

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Butte	San Francisco	Contra Costa	Kern	Sacramento	Fresno	San Joaquin	Los Angeles	Los Angeles City	Tulare	Santa Clara	Santa Barbara	San Mateo	Riverside	Orange	Napa	Monterey	Humboldt	Alameda	San Diego	San Bernardino

Center Participation in Preparation of Project Proposals

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Total Number of Proposals = 413		28	13	18	6	11	11	27	29	17	19	65	6	26	23	23	11	21	7	22	21	9
Total Value ($$) of Proposals $83,348,392		3,713,223	7,891,749	2,763,418	2,491,062	3,837,194	2,305,553	8,075,031	5,754,773	18,010,845	3,655,800	6,591,693	1,104,201	Not Answered	2,482,645	2,441,168	2,887,889	2,585,786	717,050	2,361,920	2,293,271	1,384,121
Total Value ($$) Accepted $32,547,727		1,632,259	1,965,906	1,121,425	2,425,066	1,845,536	1,785,746		1,501,993	7,060,214	500,393	2,532,750	583,583		1,497,070	1,143,836	525,336	1,790,712	200,970	1,622,753	1,974,071	838,108
Total Value ($$) Pending		436,618	3,756,515			1,923,994	445,076		1,445,507	2,474,376	1,589,260	1,500,000	273,137		557,573	925,544	1,714,736	237,641		67,621	162,940	139,018
Number Proposals Under 25,000	Accepted (A)	2		2	1		2				2	6				2	1	3		2	7	
	Rejected (R)	4		3				8			3	21					1	4		2	3	
25-75,000	A	1	1			1	2		2			1			4	1		3	2	7	1	1
	R	2		1	1	3	2	9	1		1	8	1		2			2	1	2	3	
75-150,000	A	2	1	1		2	2								6			2	1	2	1	
	R	6				1		1		1	2	1			2	1			2	2		3
150-250,000	A	5	1	1	1	3	2			2	2	2	3		1	2			2			2
	R	2		2		1		5	1	2	3	3				1	1					1
250-400,000	A								2	1	2	2	1		2	2		1		2	3	
	R	1	1	2				2	4		2	2	1				1	1				
400-750,000	A	1		1	2				1	2	2	1			1		1				1	
	R				1				1	2							1	1				
Over 750,000	A		1		1		1			3								1				
	R		1					1	1	5												

Center Participation in Preparation of Project Proposals (Continued)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
ROLE OF CENTER IN PROJECTS A = Accepted R = Rejected P = Pending																							
Played key role in conceptualization	A	4	2	1	1	1			1	3		6			4	1				2	5	2	= 33
Total = 67	R	2	1	1				1		4	1	3	1		1	1	2				1	1	= 20
	P		2	1			1		2	1		1			2		1				1	2	= 14
Participated equally with others	A	6	1		2	2	2		2	3	1	5				1			3	2	1	1	= 32
Total = 99	R	10		2		3	1	1	5	2	2	15	1		1	1			4		2		= 50
	P	1	3	1			3		3		3					1	1				1		= 17
Played ancillary or supportive role	A	1		3	2	3	3		2	1	2	4	2		9	4	2			7	8		= 53
Total = 180	R	3	1	6	1	2	1	25	4	2	8	31				1	2			2	2	1	= 92
	P	1	2	3					6	1	2				5	10	3			2			= 35
STATUS OF PROPOSALS																							
Number pending		2	7	5			4		11	2	5	1	1	11	2	11	4	2		2	2	2	
Number funded		3	4	1	5	3	3		3	4	3	14	3	8	10	6	2	5	3	12	9		
Number operational		8		3		3	2		2	3		1		5	3	3		6		4	2	4	
Number rejected		15	2	9	1	5	2	27	9	8	11	49	2	2	7	2	4	6	4	5	5	3	
AGENCY THAT REJECTED																							
U. S. Office of Education				9		5			7		2	10					1		4				
Cal. Dept. Educ.						5			1		3	1	2				3						
Local level								27		2		30											
REASONS REJECTED																							
Low priority projects									2			17			1								
Other similar projects				x		4						11	2		1								
Methods not clearly defined or supported				x					7			1											
Lack of community involvement																							
Budgetary problems				x		1					8	14					1						
Overlap												2											
Not answer		14					2		2							2	3						

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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OE-BESE
TITLE III

ED0 30186
EA 002 251

AN ANALYSIS OF REGIONAL PLANNING AGENCIES IN CALIFORNIA FUNDED BY ESEA TITLE III:

A Study of the Regional Data Processing Centers

Volume II

REPORT TO THE
EDUCATIONAL AGENCIES IN CALIFORNIA
FROM A STATEWIDE ADVISORY COMMITTEE

AND

AN ANALYSIS OF REGIONAL PLANNING AGENCIES
IN CALIFORNIA FUNDED BY ESEA TITLE III,
1968, BY ARTHUR D. LITTLE, INC.

SAN JOSE UNIFIED SCHOOL DISTRICT
SAN JOSE, CALIFORNIA 1968

The work presented or reported herein was performed persuant to a Grant from the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

Grant No. OEG-9-8-004021-0048-(056)
As Amended 7/26/68

BRIAN & RALPH SAN JOSE

FOREWARD

Purpose of the Analysis.

Since the Title III Guidelines of the Elementary and Secondary Education Act, PL 89-10, call for an evaluation of all projects funded from this source, the Regional Planning and Evaluation Agencies (RPEA) now known as PACE Centers (Projects/Programs to advance Creativity in Education) or Supplementary Education Centers, were faced with the problem of conducting an evaluation of their activities. When this problem was first discussed in January 1966, the decision by the directors of these centers, the State Department of Education, and the U.S. office of Education, was to conduct the evaluation through a joint effort. In addition, the California Regional Data Processing Centers and their linking system obtained a large share of "start up" funds to establish this system from ESEA, Title III, and as they generally were also Regional Agencies, they were invited to participate in the cooperative evaluation. Thus a separate Title III project was jointly prepared to carry out the evaluation of both systems. It included several important provisions:

(1) The evaluation was to be made utilizing the services of a nationally prominent research management firm.

(2) A nation-wide advertising was conducted calling for bids to design and to submit a research proposal to carry-out the analysis and the evaluation based on criteria and questions developed by a state-wide Advisory Committee.

(3) This committee represented the many groups at the different levels of effort and organization in California.

(4) Recommendations for change were also a part of the responsibility of the contracting management firm.

Role of Sponsoring District.

The project was sponsored by the San Jose Unified School District as a management function for the organizing of the Advisory Committee, the awarding of the bid, the research and the comprehensive visitations made, the completion of the necessary detail, and the distribution and publication of the final, approved report. The district did not have any other major ESEA, Title III project during the period, and was not involved with direct services of regional data processing centers. This project defined the district's role as that of an impartial cooperating agency.

Dr. George M. Downing, superintendent, accepted this responsibility with the approval of the Board of Education as a contribution by the district toward the improvement of education in California.

Evaluation Role of Advisory Committee.

The same requirement which instituted the analysis of these agencies also applies to the analysis itself since it too is a Title III funded project. Thus,the state-wide Advisory Committee was instituted to carry out the functions which are subsumed in this requirement. The following pages details this work which was carried out in this manner:

(1) Setting bidding specifications and defining the questions for the analysis to be made within a scope or frame of reference. These areas were incorporated in the Request for a Proposal (RFP), which is also included in the following pages.

(2) Receiving, discussing, and reviewing specified interim and final reports under a negotiated contract by the sponsoring district with Arthur D. Little, Inc., the contractor.

(3) Defining and aiding in the implementation of policy for the on-going work of the administrative and the analytical teams in the project period, February 1968 to November 30, 1968.

Disclaimer for Sponsor and Committee.

Although the Advisory Committee reviewed all aspects of the study and provided the coordinating office with "feed-back" and means of reliability checking of the work carried out in the various areas of the state, the conclusions and the recommendations expressed in the report are not necessarily those of the Committee or the district, but are in reply to the statements to the bidders in the Request for a Proposal under the section: A. Scope of the Study.

Distribution of the Report.

Distribution of the report included members of the Advisory Committee, all school districts and county offices of education in California, the U.S. Office of Education, the State Department of Education, the State Legislature, California congressmen, and colleges and universities in the state. Copies were also made available for each of these regional agencies, their boards of directors, and the state advisory committees which exist with intrest in PACE and in Regional Data Processing activities.

A copy of the report has been sent to the ERIC Clearinghouse for research in Educational Administration at Eugene, Oregon and should be available in the regular fashion through distribution channels of the ERIC system.

This is the only distribution made by the San Jose Unified School District; additional copies are not available from the sponsor or from the contractor, Arthur D. Little, Incorporated.

ADVISORY COMMITTEE FOR PROJECT TO ANALYZE THE REGIONAL PLANNING AGENCIES AND THE DATA PROCESSING AGENCIES FUNDED UNDER TITLE III, P.L. 89-10 IN CALIF.

##	Dr. Justin Bardellini	Mt. Diablo Unified School District. Administrative Assistant
##*	Dr. Duane L. Bay	Supplementary Education Center, Space, Executive Director
##	Dr. Harry Blair	Kern County Schools, Superintendent
##*	Dr. William Clinkenbeard	Los Angeles County, Title III Center, PACE Director
##*	John Davis	San Jose Unified School District, Administrative Assistant
##	Dr. Martin DeRodeff	Hayward Unified School District, Director Data Processing
##	Dr. George Downing	San Jose Unified School District, Superintendent
##	Dr. G. W. Ford	San Jose State College, Professor of Education
##	Dr. Garford Gordon	California Teachers' Association, Research Director
##	Dr. Leonard Grindstaff	Riverside County Schools, Superintendent
##	Dr. Alvin Grossman	Representative of State Superintendent of Instruction, Chief Systems and Data Processing
##	Dr. Richard Hammerle	Los Angeles City Schools, PACE Director (1968-69)
##	Robert Hansen	Fresno Unified School District, Administrative Assistant and Director of Planning and Research
##	Dr. Cecil D. Hardesty	San Diego County Schools, Superintendent
##*	Peter A. Hartman	San Jose Unified School District, Project Coordinator, Study of California Regional PACE and EDP Centers

#	William Hein	South West Regional Laboratory, Englewood Assistant Director-Business
#	Dr. Roy C. Hill	San Bernardino County Schools, Superintendent
##*	Robert Howe	State Department of Education, Educational Data Processing Project, Coordinator
##	Dr. James Jensen	University of California, Head of Field Services
#	Charles Lawler	San Mateo County, PACE Board Member
##	Edmund L. Lewis	California School Boards Association, Assistant Executive Secretary
##*	Dr. H. D. Lovik	CASA Representative and Visalia Unified School District, Superintendent
##	Charles F. Parsons	Roseville Joint Union High School District, Superintendent
##	Dr. Glen Paul	Humbolt County Schools, Superintendent
##	Robert Scheirbeck	Dixie School District, Marin County, Principal
#	Dr. David Schwartz	Los Angeles City Schools, PACE Director (1967-68)
#	Revernd Dan Towler	Los Angeles County Schools, Board Member
##	Loren A. Wann	Representative of State Superintendent of Instruction, Field Representative, School Administration
##	George Wilkenson	Alameda PACE Center, Director
##*	Blaine Wishart	Educational Resources Agency, Title III, Director, Sacramento

* Member of Proposal Evaluation Committee.

## Indicates individual regularly attended or sent an alternate.

# Only attended meeting which developed the specifications and questions for the study.

INDIVIDUALS WHO WERE KEPT INFORMED OF THE PROGRESS OF THE STUDY AND WHO WERE INVITED TO ATTEND ALL MEETINGS

	Dr. Laurence Belanger	Program Planning Consultant, Division of Instruction, State Department of Education
	Dr. Charles S. Benson	State Commission on Public Education, State Department of Education, Professor of Education, School of Education, University of California, Berkeley
	Mr. Wallace H. Burt	Consultant in Program Planning and Development, State Department of Education
	Dr. Everett T. Calvert	Deputy Superintendent of Public Instruction State Department of Education
	Dr. N. L. Gage	Center for Research and Development, Stanford University
	Dr. John Hemphill	Director, Far West Laboratory
##	Dr. Glenn Hoffmann	Superintendent, Santa Clara County Schools
##	Dean, H. Thomas James	School of Education, Stanford University
	Dr. Donald W. Johnson	Coordinator in Program Planning and Development, State Department of Education
	Dr. Donald E. Kitch	Chief Supplementary Education Services, State Department of Education
	Dr. Leland Medsker	Center for Research and Development, University of California
##	Mr. Donald Miller	Operation PEP, San Mateo County Superintendent of Schools
	Dr. Calvin Nichols	Program Officer, Supplementary Centers of Region 9, San Francisco Regional Office, U.S. Office of Education
	Dr. Robert O'Hare	Element Head, Educational Resources Services, Southwest Regional Laboratory
	Mr. Merryl Powell	Director, Instructional Laboratory Title III, ESEA, Program Planning and Development, State Department of Education

Dr. Max Rafferty	Superintendent, Public Instruction, State Department of Education
Mr. John Thorslev	Contracts Officer, San Francisco Region 9, Department of Health and Welfare, U.S. Office of Education
Dr. Lee Wickline	Assistant Director, Division of Plans and Supplementary Centers, U.S. Office of Education
Dr. Merlin C. Wittrock	Director, Center for Study of the Evaluation, Instructional Programs, University of California

Indicates individual regularly attended or sent an alternate.

Chronology of the Project

January 1966	Agreement to carry out an analysis reached cooperatively by the PACE, EDP, State of California and USOE agencies involved in PL 89-10, Title III funding in California.
January 1967	Proposed project written by representatives of the PACE and the EDP agencies submitted by San Jose Unified School District as a Title III project to analyze these systems.
May 1967	Statewide Advisory Committee formed and met to develop specifications, questions, and the rationale for the analysis and to begin to formulate policy for project.
July 1967	Addendum to project application submitted with the precised specifications now approved by the full committee for the bidding to satisfy the questions and within the scope of activity in which the contracting firm would operate.
February 1968	Project approval received for fiscal 1968 with funding period to cover activities of Advisory Committee, subcontractors for the analysis and for publication, and the sponsoring district's coordinating, administrating functions.
March 1968	Nationally advertised request for the Request For A Proposal resulted in a pre-bidding conference on March 19, 1968 attended by fourteen management firms. Six of these firms submitted proposals in response to the ten bidding specifications which were used for evaluation of the proposals. Bids were received on March 29, 1968.
April 1968	Arthur D. Little, Inc. was awarded the bid for the management firm work under the specifications following an evaluation of the six proposals by the specification subcommittee of the Advisory Committee.
	Mr. Peter Hartman was employed by San Jose Unified School District as the project coordinator to perform the necessary liaison functions among the agencies and the contractors to the district. A separate project office was opened.
May-July 1968	The preliminary phases of the study included: initial field visits were made by Arthur D. Little teams; contractor reviewed data base materials collected from agencies with the cooperation of the directors of each of the two systems: PACE and EDP; questionaires and other data collection devices and protocols were established.

	The Advisory committee reviewed questionaires and procedures on July 10, 1968 and reacted to the first set of data gathered in the field as well as to the methods and the activities carried out with respect to their representative educational agencies at that time. Progress reports were issued to this committee on a monthly basis by Arthur D. Little, beginning in June.
August 1968	The fourth progress report was reviewed at a meeting of the Advisory Committee; data were reviewed and discussed on August 20, 1968. Additional information was gathered from clients and other educational patrons of the two systems; majority of site and client visitations were completed with the approval of the Committee. Follow-up activities were specified for areas of concern; agreement was reached with contracting firm to further define certain areas and to complete data analysis.
September 1968	Statewide Advisory Committee met to analyze and to discuss the working draft of the final report on September 24-25, 1968. Recommendations for organization of report and suggestions with alternatives to certain presentations were detailed and presented as agreements between the firm and the committee. Approval of the contract's fulfillment was indicated by the committee contingent upon the firm's completion of these specified areas of agreement.
October 1968	Authur D. Little submitted to the augmented specification team, a subset of the Committee, the detail and format of these changes; annotations and conferences were carried out through the Coordinator's office with the contractor in meetings and on-site district representation at the two writing team offices of the contractor.
November 1968	The final report as defined above was submitted to the Committee; minor articulation of detail was carried out. All Advisory Comittee members were contacted for reactions and to ascertain that the specifications detailed in September were satisfied for the completion of the contract. Decision was made by the specification group to publish separate volumes for the PACE and EDP analyses in order to cover the widest set of publics involved. Contract for publication and for distribution of these volumes was awarded by the San Jose Unified School District.

December 1968	Coordinator's office was closed.
January 1969	Distribution of report completed; project terminated by district.

INVITATION TO SUBMIT A PROPOSAL TO PROVIDE RESEARCH AND CONSULTATION FOR THE ANALYSIS OF CERTAIN FEDERALLY FUNDED AGENCIES IN CALIFORNIA, 1967-68

A. Scope:

The research firm is requested to submit a proposal to make a thorough analysis of the regional planning Agencies funded by ESEA, Title III, PL 89-10 in California. These agencies are defined to be the Regional PACE Centers and the Regional Data Processing Centers. The firm is further requested to make recommendations for legislative, regulatory, or administrative changes or procedures to solve the problems or to ameliorate the situations which are defined as the result of the analysis. In support of its findings and recommendations, the firm will be expected to provide valid and appropriate data in answer to several sets of questions related to these funded agencies and other existing educational agencies in the state.

Consideration of the goals and the purposes of these sets of agencies, both those in the focus of the analysis as well as those with which there are relationships in California, shall be part of the determination of the reasonable answers. These answers shall cite the advantages, the disadvantages, for the possible alternatives for each of the various PACE or Data Processing agencies involved with reasonable prediction for the consequences of the selection of each alternative.

Questions are listed in two groups with indicated priority for action: 1.1-ffl: First; 2.1- : Second.

B. Questions Related to the Data Processing Centers:

1.1 Is there greater cost effectiveness involved in the operation of one central installation in a region rather than another type of organization or composition of an installation or installations?

1.2 Is there a difference in the level of central staff competency associated with these data processing centers in a regional system than is possible in other types of data processing agencies, such as school district, county, university, or private organizations serving this field?

1.3 What are the desirable limits in uniformity in the procedures and in the products of these regional centers? In what ways are these different from those limits which are possible under other arrangements and through other agencies whose function is also data processing in this state?

1.4 Is there provision for the adequate funding for data processing by the agencies and/or districts which require and utilize the data at the local, the regional, and the state levels? What should the fair share of the associated and the direct cost of this processing be for the distribution of funds toward this production itself as opposed to costs for work in systems analysis and in the development of programs to provide more flexibility and individual options by these users?

1.5 What provision should there be for adequate, effective safeguards for the integrity of the participating districts and/or agencies in the availability of and in the treatment of the data as it is processed and is transmitted in the system? To what degree has this protection been achieved at this state of development of the system(s)?

2.1 Is the basis for grouping of the clients and prospective clients for these data processing centers adequate for the defined programs?

2.2 To what extent do the various cooperating agencies and/or districts involved in a regional system make and implement valuable suggestions to the developments and to the changes of the system itself?

C. Questions Related to the Regional PACE Centers:

1.1 What share of enabling funds provided for the operation of these centers should be specified for planning activities as compared with the share that is allocated for the operation of projects that are directed toward satisfying the client needs in a region? Is the present allocation of these shares reasonable for the center(s)?

1.2 Is there regional participation in the determination of and in the actual assignment of priorities for the activities, including the project of the centers?

1.3 What evidence supports or denies the effectiveness of these planning centers in terms of:

(a) the community outside of the school districts and the state school system?
(b) the involvement of the schools and other community organizations in decision making?
(c) the process by which needs have been identified and involved in the center(s) activities?

2.2 What is the need for a structural reorganization in the region, in the area, or in the state beyond the specified center itself to accomplish the purposes which are involved in the educational system of the state?

E. Conditions:

1.0 The research firm will furnish reports at regular intervals as required by the Advisory Committee to the project and provide data to aid this committee in evaluating the conclusions and recommendations made by the firm.

2.0 The research firm will complete the study and submit a final written report in 50 copies by the date established by the applicant agency; this report shall follow the format and the recommendations made on an interim report to the Advisory Committee. The research firm shall agree to withhold release of any information to other agencies or public(s) until the final report has been made to the Committee and is published by a separate subcontractor for the applicant agency.

3.0 The research firm will obtain Committee approval of the composition and the design of the study.

4.0 The research firm will respect the confidential and anonymous nature of all information where appropriate and possible.

5.0 The research firm will begin its work by the time stated in its proprosal which shall be within 30 days after a contract is approved.

6.0 The research firm will provide the necessary staff and material to perform the study as proposed.

7.0 The research firm will have available the staff of the separate centers and the administrative staff of the project for interviews, discussions, and consultation as staff time permits.

F. Proposal:

You are invited to submit a proposal to be incorporated as part of the contract setting forth the following, but not limited to the specific questions which are stated for the funded agencies. Concern and provision for the formal external analysis of the centers and their systems and the recommendations for appropriate action to provide more effective and more efficient solutions for the problems and situations should include these factors:

(d) the outcomes of center activity as indicated by projects, the recipients of projects, or other specified activities which involve regional clientele.

(e) the manner in which priorities are determined?

1.4 What identifiable changes have occured in the client service area in terms of attitudes, procedures, and improved instructional or pupil performance programs? To what extent are these clients as attributable to the program(s) of the center(s)?

2.1 In what ways are the bases for grouping of the clients of the centers sound in terms of the needs of these patron agencies? Should the basis of satisfying these needs be through a definable number of institutions or a combination of such institutions?

2.2 Is the staffing pattern of the center(s) appropriate for their roles and their specified objectives?

2.3 What number and relative per cent of districts or agencies participate in projects in the region? What number and relative percentage of projects are initiated outside the center by these client organizations? How is this number and per cent, in each case, related to the number of students to be served directly, or indirectly by these projects? What relationship does the size and the geographical proximity of the center of the participating districts bear to these activities?

2.4 Are the identified needs being met by the project(s) clearly defined and are efforts being made to communicate the intent(s) of the project(s) to the region's clientele and interested citizens?

2.5 How effective are the Boards of Directors of the center(s) in relationship to the role and the objectives of the center(s)?

D. Questions Related to both the PACE and the Data Processing Centers:

1.1 Should there be a merging of these two agencies in view of the data developed in this analysis and the suggested courses of action?

1.2 What are reasonable sequences of action for these centers within the current time span that is specified for the present funding sources which are available to them?

2.1 To what extent is there an over-lapping of the roles and the objectives of these two sets of regional agencies?

2.2 What is the need for a structural reorganization in the region, in the area, or in the state beyond the specified center itself to accomplish the purposes which are involved in the educational system of the state?

E. Conditions:

1.0 The research firm will furnish reports at regular intervals as required by the Advisory Committee to the project and provide data to aid this committee in evaluating the conclusions and recommendations made by the firm.

2.0 The research firm will complete the study and submit a final written report in 50 copies by the date established by the applicant agency; this report shall follow the format and the recommendations made on an interim report to the Advisory Committee. The research firm shall agree to withhold release of any information to other agencies or public(s) until the final report has been made to the Committee and is published by a separate subcontractor for the applicant agency.

3.0 The research firm will obtain Committee approval of the composition and the design of the study.

4.0 The research firm will respect the confidential and anonymous nature of all information where appropriate and possible.

5.0 The research firm will begin its work by the time stated in its proprosal which shall be within 30 days after a contract is approved.

6.0 The research firm will provide the necessary staff and material to perform the study as proposed.

7.0 The research firm will have available the staff of the separate centers and the administrative staff of the project for interviews, discussions, and consultation as staff time permits.

F. Proposal:

You are invited to submit a proposal to be incorporated as part of the contract setting forth the following, but not limited to the specific questions which are stated for the funded agencies. Concern and provision for the formal external analysis of the centers and their systems and the recommendations for appropriate action to provide more effective and more efficient solutions for the problems and situations should include these factors:

(a) the purposes, the goals, the functions, and the methods of operations of the center(s).

(b) the description of current multiple organizational patterns, operational strategies, and fundamental issues related to these centers.

(c) the levels of governmental authority.

(d) the developing structures and the organizations of the centers.

(e) the total information and communications process of the state educational systems.

(f) the required qualifications, responsibilities, salaries, and numbers of personnel in the centers.

(g) the evaluation processes of center operation.

(h) the funding of projects with which these centers are involved.

AN ANALYSIS OF REGIONAL PLANNING AGENCIES IN CALIFORNIA FUNDED BY ESEA TITLE III:

The Study of Regional Data Processing Centers

Report to
SAN JOSE UNIFIED SCHOOL DISTRICT

October, 1968

C-70401

Arthur D. Little, Inc.

STUDY OF REGIONAL DATA PROCESSING CENTERS

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INTRODUCTION

This is a report of the evaluation study of California's ten Regional Educational Data Processing Centers. This study, together with the companion study of the State's 21 Regional Supplementary Educational (PACE) Centers, was carried out under a Title III grant awarded to the San Jose Unified School District. Our contract was with that district. District administrators arranged for the definition of study specifications and monitored our performance to those specifications throughout the course of the study.

In response to the Request for Proposal issued by the San Jose Unified School District with the assistance of the Study Specifications Committee, we designed the study to address issues of probable interest to several different "publics": the Congress of the United States, the U. S. Office of Education, the California State Legislature, the Governor, the State Board of Education, the Department of Education, the PACE Centers and EDP Centers, the intermediate units, the school districts of the State, and the statewide Study Advisory Committee. This report attempts to group our conclusions and recommendations so as to serve the information needs of those several levels of parties-at-interest.

It is a stimulating experience to work with the caliber of people we were in contact with during this study. It was exciting to see what has happened of such actual and potential significance in the very few years since ESEA was but a hope in the hearts of a "think group." It has been a satisfying experience to engage in a study which possibly can result in improved educational opportunities for so many.

Most industries have been making use of computer technology in their business operations for many years. Local school districts have been slower to capitalize on data processing for several reasons. The great majority of individual districts are far too small to justify a computer for each district. In the absence of the Regional system, most of the school districts subscribing to the Regional Data Processing Centers in California would still be using manual methods aided, perhaps, by some punched card oriented equipment. Title III funds have made possible a coordinated effort to develop a flexible set of programs to meet the various needs of individual districts. We would not have fulfilled our obligation if we had ignored or minimized in this report the problems that have arisen in initiating and implementing such a program. We hope the problems do not obscure the significance to public education in California of the services provided by these Regional Centers.

Early in the course of this study it became obvious that the EDP Centers and the PACE Centers were two completely different orgaqnisms. What started out as a joint study of two types of regional centers became two separate studies. The printing of the results of these studies as two separate reports reflects that functional disparateness.

We would like to acknowledge the truly excellent cooperation and assistance tendered us in the course of this study. The staff in the Centers were most cooperative, even after filling out frequently massive questionnaires. Board members, county office staff, school district representatives, and community leaders gave freely of their time in interviews. Some of our interviewees even interrupted their vacations to talk to us. The depth of this study effort could never have been achieved without the interest and willingness to help we have come to appreciate so greatly in California educators and their associates.

The study team particularly appreciates the help received from members of the statewide Study Advisory Committee who met with us on three different occasions, once for a day and a half. The "feedback" from that group was most candid, constructive, and appreciated. Finally, we'd like to acknowledge the fine support received from our immediate client, the administrators of the San Jose Unified School District: Dr. George M. Downing, Superintendent; Mr. John Davis, Administrative Assistant; and Mr. Peter A. Hartman, hired by the district as the Project Coordinator for this study. Their efforts have contributed significantly to the efficiency with which this project was managed and to the value which may be derived from it.

Members of the Arthur D. Little, Inc., study teams were:

Mr. William K. Benton, Cambridge
Mr. Edmond P. Dienstag, San Francisco
Dr. Michael Wilson, New England Educational Data System, Consultant
Dr. Harry B. Wolfe, San Francisco
Dr. Robert L. Barringer, San Francisco, Leader of the EDP Center Study Team

Dr. Conrad Briner, Claremont Graduate School, Consultant
Mr. Richard Hibschman, Cambridge
Mr. Larry Kilham, Cambridge
Dr. Anton Morton, Cambridge
Dr. James R. Powers, Los Angeles
Dr. Raymond J. Young, Cambridge
Dr. Charles C. Halbower, Cambridge, Project Director and Leader of the PACE Center Study Team

I. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

As a general conclusion, we find the experience with the California Regional Educational Data Processing Centers has shown the concept to be sound and its application in California to be, for the most part, successful. The system is performing a variety of useful functions; most customers of the system feel they are receiving services at a lower cost than any reasonable alternative offers, and have chosen to remain customers in the face of rising prices. Thus, further analysis of the operation of the system is in order, with a view toward strengthening it.

If there were no system of Regional Centers, many of the current customers would acquire computer facilities of their own, leading to a greater diversity in hardware, less uniformity in programs and services, and a greater total system cost. The smaller districts who are customers of the system most certainly could not afford to provide the level of service being provided to them.

On the basis of these conclusions it seems clear that the system should be encouraged by the relevant agencies: the Federal Government which has provided funds for system development and for initiating the Regional Centers; the State which provides a central executive officer for the system; the County Superintendents of Schools who offer the service; and the individual school districts making use of the service.

Every Regional Center responded that it is currently in a position to provide service to more students with an increase in revenue that would more than offset the increase in cost. We feel there should be some consolidation in the Centers. Fewer Centers will provide services at lower cost. A system of six to eight Regional Centers would probably provide the most effective organization in California. With fewer Centers than this, the effectiveness decreases as the operation becomes too large, and contact with the local district diminishes. This topic is discussed at greater length in Chapter III.

It must be recognized that there are trends tending to increase diversity of educational data processing in California. This movement tends to place pragmatic limits on the extent of uniformity achievable.

1. The number of computers in the system (and outside the system, too) using the program packages is increasing. The reasons for this proliferation of computers are varied and include political and other non-economic reasons. There do not appear to be any practical means of arresting the trend.

2. Not only is the number of computers increasing, but the number of computer configurations (different manufacturers as well as hardware configurations - tape versus disc, etc.) in use is also increasing.

We anticipate that the total system for educational data processing will continue to be a mixed system, with some school districts continuing to operate their own installations, others using commercial service bureaus or subscribing to the Regional system, while very small districts will continue with manual operations.

One of the major areas in which service can be improved is that of flexibility of service. Many customers wish to receive both minor and major changes in the service provided. In most cases the change can be effected either through an ad hoc program change or by utilizing the number of available options. It is expensive to modify operational programs. In the long run it should be less expensive to provide a wider range of options. This area is discussed further in Chapter IV.

The Regional Centers may be expected to play a strong supporting role to the California Education Information System (CEIS) when it comes into operation. For instance, the Regional Centers can act as collection points and data unification operations for CEIS; in addition, they may provide efficient means for programming parts of CEIS. The result should be financially advantageous to the state (which will have a lower cost operation), and to the Regional Centers (which should be paid for the services provided to the State).

The Regional Centers can also provide useful services to the PACE Centers. These services will be primarily in the area of statistical analyses and information services. However, we do not feel that there is any reason to merge the two types of Centers; in fact, the type of work and manner of operation differs so significantly that we do not think merger would be helpful. This is discussed further in Chapter V.

During the course of the study it has become apparent that having the Data Processing Center within the county organization is a helpful feature. The home county provides both financial and operative support, which has contributed significantly to the success of most of the Centers. Therefore, the Regional EDP Centers should not be removed from the county, despite the problems involved in serving many counties and despite county regulations which perhaps should not apply to data processing. We develop this subject in Chapter II.

It has also become clear that having educators in the administration and operations segments of the Regional Centers has been very helpful. This is a major reason that customers prefer the Regional Centers to commercial service bureaus. It is clear that this personnel policy should be continued.

However, this need not necessarily imply that the Regional Center must have its own computer. It can rent time on, for instance, a larger county installation serving other functions as well, if it is properly organized. For instance, having operators from the Educational DP Center running its programs (instead of the regular county operator) can be helpful. Chapter III discusses these subjects.

Maintaining integrity of data has not been a major problem to date, but there is a possibility that it may become one. In order to forestall this development, the data processing Centers should have firm, written policies explicitly defining their policy on providing information.

Title III money is available to be invested in educational pilot projects and innovative experiments. The DP Centers have made good use of Federal support in the past; in the future they may still continue to pioneer new trails by developing new services. There are three areas where this might happen: (1) providing service to PACE Centers; (2) assisting with the development and operation of CEIS; (3) providing consulting services to other states or governmental agencies which wish to install similar systems and can make use of the California experience.

Some of these areas may be deemed appropriate in the future for further Federal investment, since the benefits of such pilot work could become national. This is discussed in connection with other financial topics in Chapter V.

B. RECOMMENDATIONS

1. Centralized Coordination

The major changes recommended for the Regional Data Processing Centers concern centralization, coordination, and integration. Currently the system is a collection of separate agencies which offer services differing to a greater or lesser degree among Centers. Centralization of authority is necessary to reduce these disparities and thus reduce system costs; coordination is necessary to provide central executive guidance and direction; integration of all the Centers is needed to reduce cost and to improve efficiency.

An obvious symptom of this need is the fact that no single system of programs exists as "the" Pupil Personnel Package. There should be such a package so that new users may begin at the same point, and so that changes can be made to one standard package rather than to half a dozen variants. The most obvious home for such a centralized and standardized package is the Bureau of Systems and Data Processing in the State Department of Education, which has played the key role in the development of these packages. This unit should have a more effective voice in the development and use of the package, and, in line with other recommendations, should be expanded and organizationally upgraded.

With stronger central coordination it should be possible to guide the systems development efforts in channels that will make the resulting systems more useful to a larger cross section of educational data processing installations. We recommend that the systems be maintained in such a way that a large segment of third generation computers actually used in education can make use of the programs. This helps education in general by providing more options and ways of getting work accomplished inexpensively.

The Regional Data Processing Centers in California use either Honeywell 200-series or IBM 360-series computers. In order to make the packages useful to a large segment of education in California, we recommend that each State-supported package be maintained for more than one configuration. There is today a group of similar Honeywell 200 packages which could be unified relatively easily. In addition there are several systems running on IBM configurations; these are similar in input and output, but they differ in programming detail. There should be a State-supported package designed for use on larger tape/disc configurations, so that in the future an organization wishing to use the package need not incur the tremendous cost of reprogramming. A number of agencies have begun to develop standard configurations. The systems developed should be designed to operate on as many of these standard configurations as possible.

Systems provided by the recommended central authority should be supported in much the same way that programs offered by computer manufacturers, along with their hardware, are supported by those manufacturers. Additions, improvements, changes, and new systems should be issued in ready-to-use form by the central authority on a working basis, together with documentation. Users' groups should be organized to supplement the Regional Centers' own guiding groups. The systems supported should be versions of both the currently operating Pupil Personnel Packages and of the Business Packages now under way.

The major impact of this multiple system support approach will be to make the packages useful to a wider range of the state educational data processing installations. If this range can be made large enough, then it is fair to say that the system is potentially useful to California's education as a whole. In this case, the use of legislated funds, which come from the State as a whole, is appropriate for use in package extensions and additions, including the standardization of the Pupil Personnel Package. This funding level is probably necessary to the establishment of suitably sophisticated and sufficiently tested programs and systems.

Another means to move the system toward a more coordinated and centralized arrangement is related to the number of Centers in operation. We recommend that some consolidation of Centers take place; this means that in some areas two or more Centers can be merged to provide a more efficient operation. The reason for this is largely financial; data presented in Chapter II suggests, quite clearly, that fewer larger Centers would accomplish the same work at a lower cost. However, since the Centers are independent and self-supporting, it is not clear how this consolidation can be brought about. We recommend that funds for the CEIS be used to encourage a subset of the existing Centers by making them into data collection and summarization centers for CEIS, and paying them for this service. This is advantageous for the State, which will find this a cheaper and more effective alternative than maintaining separate centers. It is also of benefit to the Centers selected for encouragement, since it gives them a wider financial base.

Similarly, some of the programming additions and changes to the CEIS and the DP packages can be handled by programmers at the Regional Centers and funded by the central office. Programming and other jobs such as special analyses should be awarded only to encouraged Centers.

Another means of central control, in addition to central systems development and support, is formal veto power on system changes. To some extent, this is a formality, since the Bureau already works closely with individual Centers in deciding which changes should be made. However, we feel it is a useful formality.

In addition, the formal authority to "de-regionalize" a Center should be vested in the central office. That is, the central office should be able to revoke the official designation as a Regional Center, subject only to review by the Statewide Advisory Committee.

Finally, as a means of insuring that this centralization program remains viable, packages should be put into operation only after they have been thoroughly field tested. This will avoid some of the problems encountered in the past years by Centers offering the service with insufficiently tested programs such as the near panic requiring hasty ad hoc revisions and changes to the programs. This led to diversity and incurred immense costs in computer changes, missed deadlines, public ill-will, and loss of competent professionals. One solution is a more thorough program of field testing before issuing program packages.

To summarize, we recommend the following with regard to centralization:

1. Selection of a central authority. The Bureau of Systems and Data Processing in the State Department of Education is an obvious choice.

2. Support for more than one version of each package, covering a range of configurations.

3. Program support for packages by the central authority.

4. Establishment of a users' group not limited to the Regional Centers.

5. State funding for program development, though not for operating costs.

6. Use Centers to service CEIS, to perform programming jobs for CEIS and the supported packages.

7. Veto on changes, and de-regionalization power for the central authority.

8. Recognition of time needed for sufficient field testing of packages currently under development before release.

2. Funding

There is a fundamental difference between the type of funding we recommend for operational aspects of the system and for new extensions to the system. In general, the former should be self-supporting, while the latter should be funded by other sources.

For instance, the cost of operations (computer time, materials and supplies, salaries of Center personnel including maintenance programmers, etc.) should be paid for by charges to customers.

On the other hand, extensions of the Pupil Personnel Package and the design and programming of new systems such as the Business Package should be financed by a variety of agencies including the State, Federal sources, and foundation grants. This implies acceptance of our recommendation that the system be designed to be useful to a wide range of users. In this case state funding is appropriate.

Federal sources should also be explored. For instance, the Elementary and Secondary Education Act (ESEA) Title V is aimed at supporting and extending State Department of Education functions. Obviously this system of data processing, especially in association with CEIS, falls into this category and qualifies for Title V consideration. Title III funds should continue to be considered for support in further increasing the usefulness of Pupil Personnel Services to local school districts, and for other innovations with direct benefit to local school districts, such as the business system. Similarly, Title X of the National Defense Education Act (NDEA) should be considered here, since its mission is to improve statistical services within State Education Departments. We recognize that funds in both cases are extremely limited and mostly precommitted. However, this should not permanently eliminate consideration of these funding sources.

Whether or not the Federal inputs are available, state-level financing is appropriate for additions to the system. If the Federal money is not available, legislative action may be necessary and appropriate to provide funding. This will not be feasible unless wide-spread support for the system is evident; and that is dependent upon the breadth of potential usefulness emphasized above.

3. Business Package

We support the continued development of the Business Package; we recommend that it be brought to completion on the schedule now set for it. We recommend that it be designed in such a way as to be useful to as wide a range as possible of educational data processing installations with third generation computers throughout California.

The Business Package should be state financed, both in the design and in the programming and testing phases. Systems analysis alone is not sufficient to provide major savings to the State of California; standardized programs are the only way of avoiding duplication in programming. This calls for state support of programming and thorough testing before release.

In order to provide a wide range of usefulness, the Business Package should be designed in a slightly different manner from the Pupil Personnel Package. Specifically, it should be designed on a "cafeteria" approach, so that it consists of many different applications which can be run independently of each other. The reason for this is that many school districts already have the equivalents of parts of the business function in operation on their own machines, using their own programs. There is in many cases no reason to replace these successful applications; the goal of the Business Package should be to provide useful supplements. Thus it should consist of many separable applications designed in such a way that any group of them can be chosen for use by as many systems as possible.

4. California Education Information System

Legislation for the California Education Information System (CEIS) has now been passed in AB 1610, and personnel in the State Department of Education are already working towards its implementation. This is significant for the Regional Centers. The most important fact about the relation of CEIS to the Regional Centers is that its impact will be felt immediately and far in the future. The Business Package is scheduled to come into operation by late 1969, but the schedule for CEIS is neither so firm nor so near. We suggest that CEIS begin by recommending standard codes for various data within education. This will provide a basis for uniformity for future statistical work.

When CEIS becomes an operational entity, we recommend that it make use of the Regional Center system as a means of collecting and summarizing data. Much of the information provided to the state under CEIS will be in the form of reports which will need to be keypunched in some cases, and in most cases summarized by county or region.

The Regional Data Processing Centers are distributed through the State, they have computer power and programming talent and therefore they can well be used as collection and conversion centers for CEIS. We recommend that they be staged into this effort as early as possible so that they can begin programming and planning, and that they be paid by the State for these services. The result will be useful to the State, representing a savings over creating an entirely separate regional system, and will, in addition, broaden the base of the Regional Centers and make them more viable.

As mentioned above under the heading Centralized Coordination, this application of CEIS can be used as a selective device for encouragign some Centers, in line with our recommendation that some consolidation be effected.

A final comment in this regard: the programming talent at the Regional Centers may be used to program the CEIS routines required by the state for use in Sacramento. The Centers' familiarity with educational data processing, with State requirements, and with individual school districts' reporting procedures may be a valuable resource and produce a net savings in the programming phase.

5. Confidentiality

No major problems have yet arisen in the area of data confidentiality. However, we feel that it is extremely important that safeguards in the form of strong policy statements on data confidentiality be taken immediately. Legislation affecting this area is in process in Sacramento. In the interim we recommend that each Center adopt a strong written policy affirming that data it processes is the property of the school districts it serves and cannot be released to anyone except by written request of the school district.

Assembly Bill 1381 (1968) states that "Public records are open to inspection at all times...and every citizen has a right to inspect any public record..." It is clear that some of the information in the files at the Regional Centers falls within the purview of this act. The act provides for administrative procedures to regulate access to the records. We feel that, at a minimum, these procedures should include the requirement of a request written by each school district involved, for the release of the information.

II. SYSTEM DESCRIPTION

A. BACKGROUND

The concept of Regional Data Processing Centers had its genesis in the late 1950's. At that time, as the result of studies performed by the State Department of Education and the U. S. Office of Education, it became apparent that the application of data processing technology to educational information processing could produce great benefits both for educators and for administrators. It also became apparent that very many school districts because of their small size, limited budgets, or remoteness from sources of data processing personnel, would not be in a position to undertake EDP projects themselves.

To help solve this problem and to assist in the formulation of statewide educational information systems, the State Advisory Committee on Integrated Data Processing was formed by the Superintendent of Public Instruction. Dr. Alvin Grossman was the chairman of this committee and has continued his deep involvement in furthering the project. This committee is representative of all sectors of the educational community as well as the State Executive and Legislative branches. It is still the main policy making body in the development of statewide educational information systems and in their implementation by the Regional Centers. In addition to the Advisory Committee, the Regional Center Directors have also formed a group to coordinate and set operating standards for the Centers.

The first pilot project whose mission was to determine the feasibility of an integrated systems approach towards pupil personnel services was conducted by the Richmond City Schools under an NDEA Title V grant from 1960 to 1963. At the end of the study the staff concluded that it has been "clearly demonstrated that many districts, many schools, and many educators can get together and work out a successful data processing system. They can develop applications that are not only feasible and workable but really efficient. . ."[1]

In 1965, following the Richmond pilot project, two Regional Centers were established in Sacramento and Ventura under a grant from the U. S. Office of Education. Whereas the work done in Richmond was experimental in nature and punched card machine oriented, the Regional Centers were charged with the task of developing an integrated system of pupil personnel services that could be implemented by the use of Regional Center computers. The first year of operations was a frenetic period for those two Centers and for the dedicated individuals involved in the effort. By the second year both Centers were in operation offering a package of student programming, student scheduling, mark reporting, attendance reporting, test scoring and reporting, and guidance counseling services.

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[1] A Report of an Experiment--The State Pilot Project in Educational Data Processing, A Monograph of the Educational Systems Corporation, 1964, p. 139.

After evaluating these two projects, the State Department of Education and the Title III administrators decided that the system should be enlarged; $150,000 was made available to each of eight more Regional Centers to asist them in starting up. These Centers were expected to use the Pupil Personnel Package successfully operated in Sacramento and Ventura.

Today, three years later, nine of the ten original Centers are still in operation, and three Centers not originally funded by the Title III grant have been recognized as Regional Data Processing Centers and are today operational. This has been accomplished despite the fact that in most cases, less than the full $150,000 was made available to the Centers.

The Regional Centers are located in Ventura, Sacramento, Fresno, Kern, San Mateo, Contra Costa, Sonoma, San Francisco, Santa Clara, Riverside, San Diego and Los Angeles Counties. Some serve districts only within their home county; others serve districts in multi-county regions. The counties which compose each Center's region are identified in Table 1 of the Appendix.

In the balance of this chapter we will examine some other dimensions of the system as it exists today.

B. ORIGIN

As noted above, most of the Centers were begun with the help of Title III funding. However, the San Mateo, Riverside, and San Diego Centers have initiated these operations without Federal financial assistance. They did so in order to take advantage of the program packages already developed for the other Centers, and in general they have regarded this step as a financial advantageous one. In two cases, San Mateo and San Diego, the Centers are strongly county supported. The Riverside Center is a satellite of the Ventura Center. It would seem, therefore, that enthusiasm on the part of the organizers and operators of the Centers is as important a variable to the success of the operation as the availability of outside funding.

For many years the Los Angeles County Superintendent of Schools has offered data processing services to school districts. Since the designation of the Los Angeles Regional Data Processing Center, they have been moving away from offering individual services toward the operation of the CEIS Package of Pupil Personnel Services.

C. SIZE OF CENTERS

The range of size is quite large; there is a sixfold difference between the smallest Center and the largest Center. The Centers' size appears to be related partly to their age; older Centers have accumulated more customers. None of the Centers, however, is as large as was originally projected by the Title III program.

D. APPROXIMATE COST PER PUPIL

We have calculated the approximate cost per pupil for each Regional Center by dividing the Center's 1967-68 reported actual expenditures for pupil personnel related services by the effective number of pupils who were served by the Center. While this data provides valid and useful information if interpreted properly, care should be taken in drawing conclusions about the relative efficiency of individual Centers from this data alone. This is due to the following four factors:

1. The contents of the Pupil Personnel Package differs to some extent among the Centers. For example, several did not include the California Guidance Record as part of the package last year. (See Appendix A, Table 8 for the detailed services provided by each Center.)

2. The expenditures which were reported are in some cases estimates. This is particularly true of Centers which offered other types of data processing services in addition to pupil personnel processing. None maintained cost accounting records by type of service so that it was necessary to estimate the percentage of total expenditures which was attributable to pupil personnel processing.

3. Last year was the first year of operation for six Centers. Some experienced unusually high expenses due to reruns caused by user unfamiliarity with the system, by less than optimum operator performance, and by program "bugs." High first year operating costs are not uncommon among computer users. These are usually reduced in time or eliminated entirely.

4. Most of the Centers received some form of indirect subsidy from the County Superintendent or government. These took the form of "free" administrative services and/or rent free facilities. These have not been explicitly accounted for and may vary from Center to Center.

The effective number of students served was obtained by reducing the number of elementary students served proportionally to the ratio of prices charged for elementary and secondary services, and adding this reduced number of elementary students to the total of secondary students served. This was done for each Center, using its 1967-68 prices. This method assumes that the costs and prices of secondary and elementary student processing were proportional.

In Figure A we have charted the relationship between per-pupil costs and the effective number of students served. Omitted from this figure are the Riverside and San Francisco Centers, which are satellite centers, and Los Angeles, which served only three thousand elementary students with the Pupil Personnel Package. The parallelogram which encloses these points shows the cost area in which the system of Regional Centers operated last year. As may be seen, these costs ranged from a low of approximately $3 to a high of approximately $6.50. Prices in 1968-69 have been adjusted to bring them more in line with these costs.

FIGURE A

APPROXIMATE COST PER STUDENT RELATED TO NUMBER OF STUDENTS SERVED
1967-68

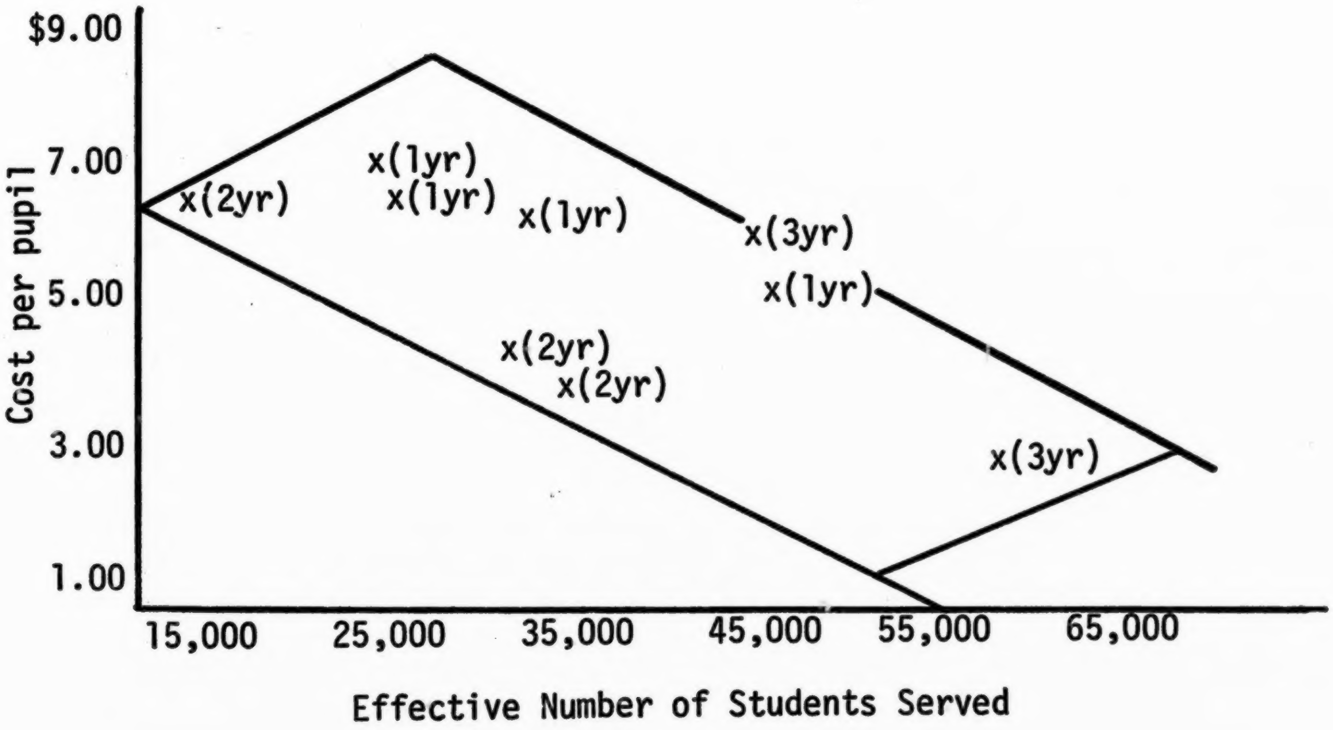

TABLE A
APPROXIMATE COST PER PUPIL SERVED

(000) 1967-68 Approximate Expenditures for Pupil Personnel Services	(000) Secondary Students Served	(000) Elementary Students Served	Effective Number Students Served	Approximate Cost per Pupil
3 Year Old Centers				
177	53	41	66	2.70
308	56		56	5.50
2 Year Old Centers				
142	45	10	50	2.80
135*	32		32	4.20
84*	2	34	15	5.60
1 Year Old Centers**				
80	21	2	22	3.60
241	47	3	48	5.00
193	28	14	33	5.90
159	20	16	25	6.40
171	26		26	6.60
115	16		16	7.20

E. MARKET PENETRATION

In defining the markets for each Regional Center we have included only school districts with enrollments of less than 20,000. This was done on the assumption that larger school districts, if not already using their own computers, could economically afford to do so at a later date and might be drawn into doing so by the advantages of having an in-house computer. Twenty thousand is an arbitrary figure and in individual cases there may be good reasons for districts with less than 20,000 students using their own computer or districts of more than 20,000 belonging to a Center. In fact, in calculating the percent of the market already penetrated by each Center, we have included in the market any districts larger than 20,000 which are now customers.

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* Do not offer CEIS Package

** Los Angeles has been omitted because of the small number of students served

Tables B and C show the percentages of the potential markets which have been captured by each Center for secondary and elementary students.

TABLE B

MARKET PENETRATION CEIS PACKAGE PUPIL PERSONNEL SERVICES

SECONDARY SCHOOLS

1967-68

Regional Center	Secondary School Market* Within Region	Students Served From Region	% Market
San Mateo**	35,938	32,000	89.1
Central Valley	56,722	45,000	79.3
Northwest	43,439	28,400	65.3
Ventura	55,700	32,000	57.5
Sacramento	117,010	56,000	47.9
San Francisco	39,944	16,000	40.0
San Diego	48,797	19,000	39.0
Santa Clara	100,024	31,000	31.0
East Bay	111,492	26,400	23.7
Riverside	96,900	20,800	21.4
Kern**	25,370	2,000	7.9
Net totals	731,336	308,600	42.3
Los Angeles	244,732	-	-
Orange	76,694	-	-
Marin	13,767	-	-
	335,193		
Statewide	1,066,529	308,600	28.9

* Includes all districts with less than 20,000 students. Excludes districts with more than 20,000 students except those currently subscribing to Regional Center services.

** Does not offer CEIS Package, market penetration based upon special services.

TABLE C

MARKET PENETRATION PUPIL PERSONNEL SERVICES

ELEMENTARY SCHOOLS

1967-68

Regional Center	Elementary School Market*	Students Served	% Market
Ventura	114,500	41,000	36.0
Northwest**	75,300	14,100	18.8
San Diego	101,300	16,100	15.9
Central Valley	154,200	10,000	6.5
Riverside	165,600	2,000	1.2
Los Angeles	463,100	3,300	.7
East Bay	138,000	-	-
Kern	66,700	-	-
Orange	185,000	-	-
Sacramento	207,000	-	-
San Francisco	51,900	-	-
San Mateo	83,600	-	-
Santa Clara	194,300	-	-
Total	2,031,400	86,500	4.2

These tables indicate that while a substantial percent of the secondary school market has been captured - 44 per cent of the market served by Centers offering a Pupil Personnel Package - only 4 per cent of the elementary school market has been captured. While the services which are offered to elementary schools are much more limited than those offered to secondary schools, perhaps this is a segment of the market which should be more aggressively approached.

We have found an apparent relationship between the number of years a Center has been in operation and the number of students that it has served. The oldest Centers, Sacramento and Ventura, each served about 50,000 secondary students last year. The newest Centers served between 25,000 and 45,000. Figure B, below, exhibits this relationship.

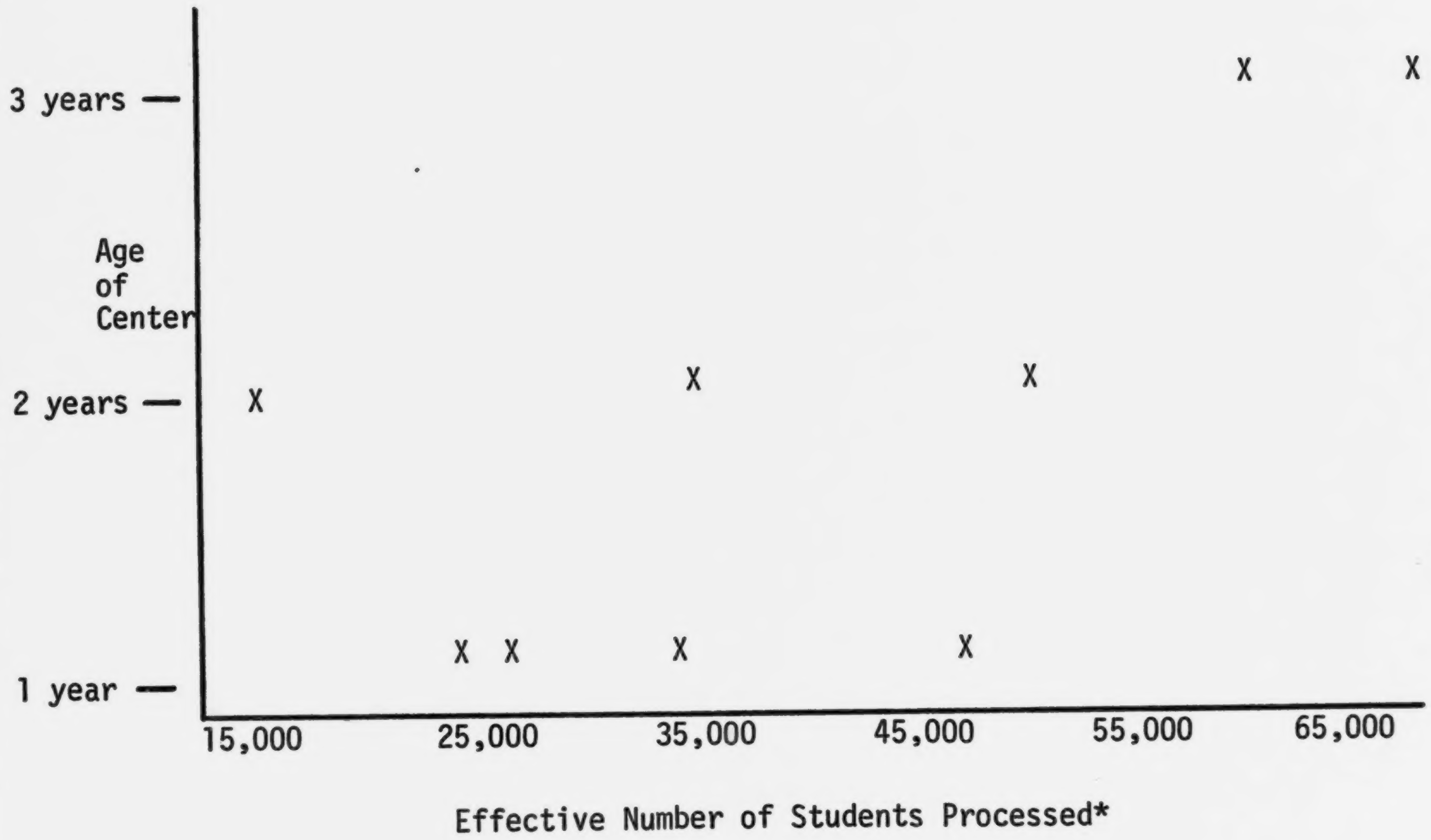
* Includes all districts with less than 20,000 students. Excludes districts with more than 20,000 students except those currently subscribing to Regional Center services.

** The figure for the Northwest Regional Center excludes Marin County, with 31,000 elementary students, since they are not served through the Northwest Regional Center.

FIGURE B

AGE OF REGIONAL CENTERS RELATED TO EFFECTIVE* NUMBER OF STUDENTS PROCESSED

1967-68



* Note: See page 13 for explanation of the way "effective number of students" was calculated.

F. FLEXIBILITY

The amount of flexibility exhibited varies widely from Center to Center. However, the tendency of the system as a whole is to a low degree of flexibility; a number of Centers offer only the entire Pupil Personnel Package, and very few of them will make minor modifications in the output. Few Centers have exploited the full system flexibilities already available within the system.

This has kept a number of school systems from utilizing the services, especially in the case of elementary schools which wish to have small changes made to the standard reports. It is quite true that making even minor modifications is (1) sometimes expensive, and (2) in violation of the desire to maintain uniformity over the system. Moreover, most Centers were still struggling last year to make the system operational and did not have the time or inclination to embroider programs to the individual wishes of their customers.

Nevertheless, this seems to be an area where further investigation seems desirable. In Oregon, for example, the solution under development by Project OTIS to this problem of maintaining standardization while permitting individual differences is to interpose a conversion table between data received and sent to schools (external data) and data in the central files (internal data). By reference to this table incoming data is translated to standard format and code before being used to update files. Outgoing data is retranslated to the formats desired by the individual schools. This scheme, it should be noted, is being implemented on a computer that is considerably larger than any currently in use in the California system, and the method has not yet been tested.

G. COMPETITIVE SERVICES

There are two main sources of competition:

1. Many school districts have chosen to acquire their own computers or to use their County's computers, independently of the Regional Data Processing Center system.

2. Other schools have chosen to make use of commercial service bureaus not affiliated with educational institutions.

The reasons given by interviewees for preferring the Regional Centers to their own computers are basically costs. A large investment must be made by a school district which wishes to have its own specially tailored computer; this is an option available mainly to the large cities.

To some extent large districts or counties may now avoid some of the expenses of developing their own Pupil Personnel Packages, if they can afford an equipment configuration similar to that used by the Regional Centers. Both the equipment manufacturers and some of the Regional Centers will make the package available to such users.

For example, Napa County is acquiring a Honeywell H-200 and expects to use Honeywell's version of the Pupil Personnel Package. San Jose Unified is already an H-200 user and also plans to use the Package. It must be recognized, however, that there are special problems and costs associated with using software that has not been self developed. These costs may be considerable depending on how thoroughly debugged the system is, and how well it has been documented. Furthermore, the continuing costs of maintenance programming must be considered.

For the smaller school districts, which constitute a potential market for the Regional Centers, service bureaus occasionally seem to offer cost advantages. In some cases the service bureau is more expensive but is also more flexible than the Regional Centers. This year, for example, the Univac San Francisco Data Center has signed up three districts that last year were affiliated with Regional Centers. The explanation offered by the Univac representative was their willingness to be more flexible in dealing with these districts than the Regional Center had found it possible to be. The district superintendent contacted confirmed this; however, they also reported that the quality of the service for the first several months left much to be desired.

However, the overwhelming majority of schools interviewed indicated that they would prefer to deal with the Regional Centers if they could secure the services desired, mainly because the personnel in the Regional Centers have usually had extensive experience in schools themselves. They understand the problems of educators and can respond more effectively than service bureaus. We found the same to be true in our investigations of the New England and New York State data centers.

H. NUMBER OF COUNTIES SERVED

Five of the Regional Centers serve only the same county in which they are located. Others serve several counties; the largest number, nineteen, is served by the Sacramento Center.

The single county Centers are significantly different from the multi-county Centers. For example, the EDP Centers in San Diego and San Mateo counties were established by the county offices independently of Title III funding.

Furthermore, the single county Centers do not have to contend with the problem of serving "many masters," a problem which occurs in some of the multi-county Centers. This problem is based on the fact that services must be provided to schools in a number of counties, while the Center is administratively part of a single county. In fact, the Director of the Data Processing Center usually reports to the Superintendent of Schools in his home county. He is thus exposed to a potential conflict because his administrative superior resides in one county, while his customers are located in many.

In some cases this problem has been avoided by the formation of a Steering Committee representative of all counties involved. This has worked out well in the Central Valley Region, for example, but poorly in the Northwest Region. On the other hand, some multi-county Regional Centers see little advantage in the Steering Committee, and prefer to deal directly with schools throughout their area. The Ventura Center is one example of this approach.

I. STAFF COMPETENCY

By and large, Directors, Coordinators, and technical staffs appear to be competent. There are, of course, variations from Center to Center, but none that we would not expect in such a new and dynamic field. The general level of competency appears - indeed, has proven itself - capable of meeting the demands of establishing and operating data processing centers. We feel that only the most affluent school districts could afford to retain a staff of similar competence.

Since the Centers are organizationally part of their home county, their salary scales are generally geared to the county's. Sometimes this prevents meeting some of the higher salaries expected by data processing and systems people. This is compounded by the reluctance of many counties to pay high salaries to non-certificated personnel. However, a comparison of the salary ranges within the Regional Centers and NEEDS - New England Educational Data System - indicates that removing county imposed salary limitations would not necessarily result in higher salaries. The salaries of personnel at NEEDS are well within the ranges for comparable personnel in California.

Turnover at the Director's level appears to have been significantly higher than would normally be expected. In the last year seven of the twelve Directors have changed jobs. This is explained by the particular difficulties associated with the first year or two of operations, by some instances of personality conflicts, and by the limited supply of and great demand for such men. We expect staff turnover to continue, though at a reduced rate, as facilities settle down.

J. RELATIONS TO PACE CENTERS

Two of the Centers (Ventura and San Mateo) have provided data processing services to educational projects or PACE Centers. Nearly all the others are familiar with PACE Centers and feel that there is a possibility of providing services to them. However, most have been so involved in operational problems that they have not made missionary efforts towards the PACE Centers. They generally look forward to providing statistical services in the future.

K. EQUIPMENT

The Pupil Personnel Package was originally designed and implemented for the Honeywell 200 computer. At present there are six Honeywell computers in operation; there are also four IBM system 360's and one RCA 301 installation. The RCA installation in Los Angeles does not offer the Pupil Personnel Package and is therefore not included in this discussion.

The IBM systems are located in the newer Centers, and are more dissimilar in size and configuration than the Honeywell systems. This is due to the fact that three of the four are county machines, rather than machines dedicated to educational data processing or to the Pupil Personnel Package.

In Table D we have ordered the Regional Centers by their age. As may be seen, the Honeywell Centers are generally older than the IBM Centers. The average age of the Honeywell Centers is 2.2 years; the average age of the IBM Centers is 1.3 years.

TABLE D

AGE OF REGIONAL CENTERS AND TYPE OF EQUIPMENT USED

Regional Center	Years in Operation	Type of Equipment
A	3	H2200
D	3	H200
H	2	H200
K	2	H200
E	2	360/30
B	1	360/40
J	1	H200
G	1	360/40
F	1	360/30

L. RELATIONSHIP WITH COUNTIES

Although many of the Regional Data Processing Centers are truly "regional" in that they serve more than one county, each Center is affiliated very strongly with one County Superintendent's office. This affiliation has both advantages and disadvantages; on balance it would appear that the advantages outweigh the disadvantages.

The disadvantages include the following:

1. It is not always recognized that data processing organizations must have different operating procedures than other types of educational offices. Data processing facilities are subject to seasonal peak and "crash" requirements which necessitate considerable amounts of staff overtime. The working pace is frequently more intensive and strenuous, at least during certain parts of the year. These differences should be recognized by county administrative staffs and allowances made for compensatory time off and greater flexibility in working hours.

2. Salary structures in data processing organizations should not be geared to academic or educational salary structures or those of the County Civil Service. Although a good understanding of educational requirements is extremely useful for Center staff, we note that the lowest Directors' salaries are associated with non-certificated Directors. There seems to be undue emphasis on formal academic salary structures.

3. Customers in counties outside that in which the Regional Center is located occasionally feel that their requirements do not carry sufficient weight in setting the direction and policy of the Data Processing Center's operations. In most instances, however, Center Directors and County Superintendents have explicitly tried to give the other counties and school districts opportunities and media for expressing their viewpoints.

The major advantages of county association include the following:

1. The affiliated County Superintendent's office normally provices any required subsidy of the Center; in effect the County Superintendent's office "guarantees" the Center's operations. This, of course, is of great importance to the viability of many of the Centers, especially in the first year or two of operations. In most instances the County Superintendent's office also provides physical facilities which are, in effect, rent free.

2. Close affiliation with the county provides a vehicle for communication and stimulates the Superintendent to encourage utilization of the Center's facilities. This provides a natural, "built-in," basic market for the Center.

3. In many instances the County Superintendent's office provides important administrative, supervisory and supporting services for the Center, services which the Center could not justify if it were an independent facility.

M. RELATIONSHIPS WITH CLIENTS

There are differences in the way certain Centers have established relationships with their district clients for transmission of data and reports, indoctrination into data processing requirements and procedures, and explanation and rectification of difficulties or problems. Most Centers have appointed "educational coordinators," whose job is to maintain contact with clients through frequent visits and phone calls. In San Mateo and Riverside, however, this function is performed by the Director and/or his data processing staff. In San Mateo each district also appoints its own coordinator to work with the schools. Those Centers that do not have their own equipment, or access to their county's, act in effect as coordinating or staging agencies for the Centers that do the actual computer processing.

Relationships at individual schools are fairly standard in that one staff member, generally the Principal, Vice Principal, or a Guidance Counselor, is assigned the responsibility for data processing coordination. Frequently, a clerk or secretary is also trained to perform detailed clerical procedures, such as updating of student records. The Centers generally carry out indoctrination meetings at least once a year for school data processing personnel. They also maintain a varying degree of personal contact with schools through visits.

This is, of course, considerably easier for Centers with small geographical territories than for those that serve many widely dispersed counties. Communication is maintained by telephone. In general, school liaison staffs are encouraged to call the Regional Data Processing Center staff whenever there are any questions or difficulties associated with the data processing activities. Data is usually transported by United Parcel Service or Greyhound Bus. In exceptional cases personal cars are used.

III. SERVICES AND COSTS

A. DESCRIPTION OF PUPIL PERSONNEL SYSTEM

The system of programs which was developed by the State Department of Education and implemented by the Sacramento and Ventura Regional Centers is now entering its fourth year of operation. As discussed previously, many forces tend to make this package dissimilar at the various Centers. In discussing the package in this section, therefore, we shall not address ourselves to the level of detail which would account, for example, for differences in input forms required by different approaches to source data acquisition. Rather, we will discuss the functional characteristics of the components of the Pupil Personnel Package. These are to a great extent still common to all the Regional Centers.

The pupil personnel package is designed to serve six functional areas: student programming, student scheduling, mark reporting, attendance accounting, test scoring and reporting, and guidance counseling.

Student programming is the module within which a school's master schedule is prepared. After all students have settled upon their courses for the coming year, the guidance counsellor prepares a set of input documents which reflect these decisions. This data is then processed by the Center to provide the school administrator with listings of the number of students who have requested each course and other statistics. The administrator is then able to determine the number of sections, the kinds of rooms, and the professional requirements to teach these courses. From this information he prepares a master schedule.

Using the master schedule developed in the preceding module, students are then scheduled into course sections. The computer schedules students so that the fewest number of conflicts are created. It is inevitable, however, that a certain number of conflicts will occur, and these are printed out and returned to the school administrator for resolution. The administrator may resolve these conflicts by adding or rescheduling sections, and another attempt is made to schedule the students' requests. This process of simulation is usually repeated three times in order to reduce the number of conflicts.

Following this, a list of students assigned to each class and section is provided to the school in addition to student locator cards which show the students' schedule, and other information.

The mark reporting module permits teachers to record grades on pre-printed forms and to select comment codes which describe the student's performance. From this document report cards are produced for mailing to parents. In addition, a listing of marks for each teacher is printed, a summary of the distribution of marks for each class and teacher, and a listing of students who have received failing or incomplete marks is prepared. Finally, a list of students ranked by mark point average and pressure sensitive labels on which are printed each student's grades is produced.

The attendance accounting module uses data submitted by the schools on pre-printed forms to produce attendance reports. In previous years the computer was used to calculate the ADA. A list of students who have had irregular attendance records during the school month is also prepared as an output from this module.

The test scoring and reporting module uses mark-sense input to score achievement and ability tests. A variety of output reports are produced including a listing of student scores arranged by classroom or grade, pressure sensitive labels which are used to update counseling records, and various statistical reports.

In addition to these reports, a new guidance counseling record, the California Guidance Record, is produced at some Centers as an output of the Pupil Personnel Package. This record is a summary of courses, credits, grades, and test scores. It is used as an official transcript of the student's record and replaces the previously mentioned pressure sensitive labels.

B. PENETRATION REQUIREMENTS

Based on cost considerations, the Centers now in operation are running well below their optimal size. Therefore, increases in size to permit higher machine utilization and in some cases the use of larger machines, appear desirable. It is sometimes suggested that adding new services such as the business package now under design will increase machine loadings even if no additional customers join the system. The business package, however, is scheduled to become operational a year from now, and it is possible that it may arrive even later. This, therefore, is not a short term solution.

Therefore, it is important that the Centers gain new customers from the pool of potential customers. Since the average market penetration is only 39 per cent, this seems to be a possibility.

The graph of cost-per-pupil versus Center size presented in Chapter II (System Description) indicates that the result of increased market penetration would be decreased cost.

Penetration into the elementary schools will not increase significantly until program packages which are more relevant to their needs are developed. The Centers which have not done so might consider the NEEDS tactic of organizing an advisory committee of elementary school administrators to assist in this development.

C. EQUIPMENT OWNERSHIP

The use of a computer not under control of the Regional Center has created some problems. For instance, using another organization's computer affords little ability for crash efforts at crucial times in education (such as scheduling time); in some cases this has resulted in missed deadlines and other serious problems. Furthermore, running the Pupil Personnel Package on a service bureau basis does not provide an experienced operator for the program. A County computer operator who is not familiar with the package itself or with education in general may not be aware of many problems which can be averted by a knowledgeable operator. Therefore, many wasted runs, taking both time and money, result.

Since the newer Centers have tended to use County Computers, and one of the two satellite Centers which is planning to transfer its work from another Center's machine to its own will share the computer, it is well worth exploring this topic for its operating implications.

Many of the problems involved in a Regional Center's sharing a computer with other County departments are the result of operator unfamiliarity with the Pupil Personnel Package. A computer operator who is not thoroughly familiar with the package will be unable to respond to a wide range of minor problems which turn up in typical computer operations, many of which can be easily corrected by a man who knows the package. In the hands of one who does not, minor troubles usually cause termination of a run, even if no output has been produced. Another run must wait until the trouble is fixed and until computer time again becomes available. The total delay may be considerable.

A possible solution is to have a Regional Center operator run the Center's packages on the shared machine. The personnel cost involved is almost certainly less than the cost of delays, computer expense, and potential customers lost.

However, the use of shared large scale computers for pupil personnel programs, which have in many cases been programmed for smaller machines has caused some Centers to operate in a multi-program mode. In this mode two or more programs are run simultaneously, sharing the computer's large memory between them. This results in splitting the cost of the machine between the two applications.

Since even large scale computers usually have only one printer available, the output for programs run in this mode is usually written to tape. This tape may then be printed by a second, smaller machine or printed later as a "foreground" or "spooling" operation on the large computer. In either case the actual printing of the output may occur hours after the program has run.

This has serious implications for the suggestion above that education oriented computer operators might be used to avoid the problems involved in utilizing County machines. This is because of two reasons:

1. Some troubles with program execution are reported during the program's operation. These are called "on-line" messages and are often printed on the system's typewriter. The operator should know how to respond to these messages; if he is an educational data processor, he must be present at run time.

2. Sometimes errors in input or control can be recognized from the first few pages of printed output, by a trained operator.

The operator can then stop the run, make the necessary corrections and begin again, with only a minimal loss of machine time. However, if the output is only printed by a spooling operation after a time lapse of some hours, the entire run would go to completion before anyone would see the output and be able to recognize the need for changes.

Clearly this area of operation must be investigated further.

D. NUMBER OF CENTERS

As indicated above, based on cost, the development of fewer but larger Centers is desirable. However, in fact, the trend is in the opposite direction. Two Centers which do not now have computers are planning to acquire them; this will remove significant numbers of customers from currently operating Centers.

The reasons for this trend are external to educational data processing. One relevant fact is that some of the newer systems have not used the Honeywell 200 and in some cases have chosen not to use dedicated computers. This trend away from the current Honeywell system orientation of the Pupil Personnel Package should be reflected in coordinated action within the framework of CEIS.

One possibility is to provide standard program packages which accomplish the same data processing functions on different makes and configurations of computers. From the point of view of a county which is considering acquiring equipment, ideally there should be packages of programs which work on as many makes and configurations of machines as possible. From a practical point of view, however, perhaps two or three would suffice.

The concept of a "supported package" applies here. A supported package is a set of computer programs which operates on a specific computer; necessary corrections when bugs are found, improvements when requirements change, and additions when they become feasible are provided by a central source. In commercial data processing, this is often the computer manufacturer; in the Regional Centers, the supporting agency might well be the Office of Information Systems of the State Department of Education. At present a new computer Center may acquire programs from any operational Center. They are all in the public domain. This has a number of deleterious effects, the main one being a gradual accumulation of differences among the Centers. This accumulation of differences, if carried to its logical conclusion, would prevent the central support of more than a small fraction of the Centers and could eliminate all the financial advantages of standardization.

This suggests that the Department of Education could support Pupil Personnel Packages for (1) the tape oriented Honeywell systems now in use, and (2) the larger disc and tape oriented systems. All of these programs should ideally be written in basic COBOL so that they can be run on machines provided by different manufacturers.

Producing and documenting such standard systems will require considerable funds. If the packages are developed to be of potential benefit to a great number of educational organizations, then the use of State funds would appear to be justified. This range of benefit would result from the support of systems which can be run on most standard computer systems, and this level of flexibility might result from a careful choice of configuration for systems analysis and the use of basic COBOL programming.

Since detailed programming as well as systems analysis is a major cost which can be reduced by producing a standard package, these remarks apply to programming as well as to systems analysis.

If statewide benefit can be assured by program flexibility based on standard configurations and the use of basic COBOL as the programming language, initiative at the legislative or State Department of Education level is appropriate. Alternatively, county superintendents may provide financial assistance to these efforts at standardization, and have in fact done so.

E. INTEGRITY OF INFORMATION

The Regional Centers provide a central repository for a great deal of very detailed information concerning both students and teachers. As time passes, the kinds of information maintained at the Regional Center will probably increase, and the information will be available for a longer historical period. When the Business Package comes into use, critical financial information will be added to the present sensitive student information. There is general recognition among the Directors of the Regional Centers of the critical nature of the information in these files and the importance of maintaining strict controls on the access to these files.

In considering the integrity of files, two different dangers should be recognized. The first is the danger of unauthorized access to the information. This usually occurs with the aid, or at least the cognizance, of someone associated with the Center. The measures necessary to guard against this are those which have been used for decades, namely, the careful screening of applicants and the examination of their backgrounds. Special care must be taken in the handling of files with sensitive information so that only senior and more trusted employees have access to them.

The other danger is newer and is due primarily to the concentration of information in a single data processing installation. It has always been true that a great deal of personal information has been available to anyone willing to make the effort to collect it, for instance, by trailing or by interviewing large numbers of people with whom he normally comes into contact. Historically this has been such an expensive process that an individual's privacy has been fairly assured. However, with the advent of computer data-banks, it has become less expensive to maintain large amounts of data about individuals. The very fact that large amounts of information about individuals is available raises questions on the propriety of its use.

The following are two examples of information potentially subject to misuse:

1. The files of the Regional Centers now contain the names of thousands of school children, together with attendance information and academic records. In addition, the files contain parents' name and addresses and other information about their families. This could prove to be an extremely valuable source of names for a mailing list. At current prices for good mailing lists, this might prove to be a strong temptation for someone in a Regional Center.

2. Performance records of individual teachers will become quite voluminous with the passage of time. All the courses taught by an individual teacher will be in the file in addition to the names of the students who have taken these courses, and their attendance and academic records. With this information a newspaper reporter might write a very interesting series on the performance of teachers. The way the material is presented may in fact be misrepresentative of the true facts, but if the public at large were provided access to these files, incorrect comparisons might be drawn from the grade records of the various students or teachers.

A serious breach of these files might have repercussions not only for the students, the school district, and/or the teachers involved, but also for the future of the Regional EDP Centers. If the school districts lose confidence in the integrity of the files which are left in the custody of the EDP Centers, this could mean a great loss of customers to the Regional Centers.

The Directors of the Regional Centers seem well aware of the issues involved. Almost all have agreed upon policies and some have formalized them. These policies generally state that information provided by the school districts does not belong to the Regional Centers, and that the Centers therefore are not free to deliver this information to anyone without the specific and written consent of the school district. This is true regardless of whether or not the information is "public information." This policy should be formalized and adopted by each Regional Center to serve as a protection not only to the individuals involved, but also to the Regional Centers themselves.

Recently, a breach in the above stated policy has occurred. A County Counsel ruled that when information is in the public domain the Regional Center must make it available to anyone who is willing to pay the incidental costs of programming and computer time needed to make it available. We feel that this is an unhappy precedent and that steps should be taken to avoid its repetition. In particular, we feel that each school district should control the release of its own information.

F. COORDINATION BY EDUCATORS

Our interviews of Regional Center customers have indicated that the use of staff with education backgrounds is highly desirable because only this type of person truly understands the problems and requirements of educators. In this connection the age of the Center or the number of years a school has used its services are not relevant. During the first year or two of operations it is normal for a certain number of shakedown problems to occur, and these require the coordination of school and Center administrators. In later years, when these problems have been solved, the coordination between school and Center becomes primarily one of handling clerical functions. This suggests the need for two types of coordinator: an administrative type for new customers, and a clerical control type for established customers. Perhaps the larger Centers can afford both; smaller Centers should avoid personnel policies which prevent redefining these positions.

G. BUSINESS PACKAGE FLEXIBILITY

In offering the Pupil Personnel Package, most Centers have emphasized the package approach, as opposed to the "supermarket" approach. That is, most Centers offer the entire package, rather than only parts of it. It is interesting to note that NEEDS, which only now is beginning to finance its operations solely from operating income, is changing from a package approach to a supermarket approach. The advantages of the package approach in California, however, are obvious and stem mainly from the economies of standardized operations.

The Business Package which is now being developed, however, should be viewed differently. Many cities and counties are already operating some part of the Business Package on their own computers. For these organizations the Business Package will offer mainly supplementary services. This suggests that it should be designed along the lines of the supermarket approach, rather than the package approach. To the maximum extent feasible, it should be designed and applied so that the inventory system, the budget system, the accounts receivable system, etc., can be implemented and used independently.

H. ALTERNATIVE SERVICES AVAILABLE FROM PRIVATE DATA CENTERS

Based upon a survey of three private data centers in the San Francisco Bay Area, it appears as if alternative services are fairly readily available. These three companies offer a varying number of services ranging from scheduling to a complete package including grade reporting, attendance reporting, and testing.

Two of the three data centers reported that this market is a growing one and, in fact, one data center has signed up several districts that last year were customers of a Regional Center. In this case, it was reported that the private data center was able to effectively compete with the Regional Center by being more flexible in meeting the demands of the school districts. The quality of its services has yet to be established.

All three data centers reported that they experienced no problems in meeting the prices that were charged last year by the Regional Centers. Though the Centers were partially subsidized by Federal and County funds, the private data centers feel they can compete by being more flexible and by not having to contend with Civil Service constraints.

Though these data centers were not a serious threat to the Regional Centers last year, it appears that they will place an upper limit on the prices that the Regional Centers will be able to charge their customers and a lower limit on the quality of the service that the Centers will have to provide their customers. Some school districts have found, on closer examination, that the range of reports available from private service bureaus is limited, and that these bureaus tend to place a larger share of the input burden on the school district than do the Regional Centers.

IV. PROGRAM DEVELOPMENT

As time passes and customer feedback accumulates, the system's personnel will recognize possibilities for useful modifications to the programs now in use. In addition, decisions will be made at the state level to add new application packages to the Regional Centers' services In both cases the problem is to improve or add service and at the same time to control divergence within the system so as to maintain uniformity. Therefore consideration must be given to the means of doing this.

A. UNIFORMITY

Ever since Henry Ford's time, manufacturers of goods and providers of services have been vividly aware of the advantages in uniformity of product. There certainly are major advantages to uniformity - uniform services are cheaper to provide - but uniformity is not always feasible. Existing investments in various types of hardware and software, including the education and experience of people involved, must represent a starting point for discussion of uniformity within the Regional DP Centers, and this existing investment creates both costs and forces which limit any application of the principle of uniformity in that system.

Within the educational data processing world there are two major types of uniformity which should be discussed. The difference is basically a "what" vs. "how" distinction. The computer within the system can be regarded as a black box which performs certain tasks. The question of whether all of the black boxes in the system should perform the same tasks is a different question from that of whether all the black boxes should be identical inside. We will discuss these types of uniformity separately below and synthesize the discussion after certain other topics have been touched on as well.

1. UNIFORMITY OF RESULTS

By results here we mean any product of a Data Processing Center which is sent elsewhere as communication. For instance, reports provided to schools, to parents (grade reports), to colleges (cumulative records or transcripts), and to the State of California are all results of an installation's activities in this sense.

a. Data Files. It is not quite so obvious that the data files which the installation maintains are also results of this operation. However, there are many circumstances under which these files must be transmitted away from a Data Processing Center's own sphere, and in these circumstances they actually do constitute results of the center's operation. There are two notable cases where this is true: First, when a student transfers from an area served by one center to an area served by another, his master records should go with him. Second, when the student stays put but the areas change, so that an entire school district switches from using one center to using another one (possibly a new one opened which is closer to it), the entire file must be transferred.

It seems clear from our study of the centers' operations that at least the data files must be very close to absolutely uniform. There are basically two reasons for this. The first, as noted above, is the transfer of data from one center to another, whether because the student has moved or a school has reassigned its business to another center.

In connection with this point, one customer told us a revealing story concerning operations at one of the centers. The San Ramon School District, which is near Contra Costa in the East Bay area, decided to get a year's head start by subscribing to the Pupil Personnel Package from the Ventura Center (hundreds of miles away) during the year before the Contra Costa Center was due to open. This operation was highly successful. San Ramon finished that year with a master tape containing student records which it expected to use the following year at Contra Costa. This tape already contained one year's information and would thus cut the lead time required before complete student records for some students (the seniors) were available from four years to three years. When services began at Contra Costa the following year, however, the Contra Costa computer would not accept the tape provided by the Ventura Center.

The file formats of the information recorded were checked and ascertained to be identical. It turned out, after investigation, that the difference was due to the fact that the Ventura Center had Honeywell equipment while the Contra Costa Center had IBM equipment. One pupil had a hyphenated last name. Despite industry-wide conventions on symbols for characters, the IBM machine would not accept the hyphen as recorded on the tape by the Honeywell computer. This was a very obscure problem, and no fault can be laid at either party's door for not foreseeing it. It was a typical programming "bug".

The existence of this "bug" caused a great deal of trouble for the San Ramon School District. It took considerable time to determine the cause of the problem and by that time a great deal of the effort that had gone into creating this preliminary tape was wasted. This serves to underscore two points: (1) the importance of uniformity in the data files, and (2) the difficulty of insuring this uniformity especially when equipmetn from various manufacturers is in use. To some extent uniformity can only be an ideal, and never an absolute reality. The real question in practical circumstances like the present one is: How much is it right to spend in time, money and effort to move a little closer to uniformity? The answer to this question must be based upon the realization that it is generally much more costly to fix errors or discrepancies after they have built into a system, usually at great expense, than to make a larger investment in uniformity at the beginning.

The uniformity requirements can be relaxed somewhat by using translation programs, which convert a given Center's files into the standard format and then convert the standard format to any other center's format. Translation programs can take care of files which contain additional information beyond the basic system data, and can also deal with changing from manufacturer to manufacturer.

This underscores the need for complete information at each Center. Even if technical problems with transfer are solved, common information must be in use or this will do no good. The basic data requirements should be uniformly applied, though additional information can be accomodated.

The final major reason for requiring data files to be uniform is statistical and research related rather than operationally related. If the State of California as a whole is to be able to summarize the status of education on a statewide basis, identical information must be available everywhere. This is, of course, the basis of the California Educational Information System now being developed; the same principle must apply to the Regional Data Processing Centers.

b. Working Reports. The data files discussed above must be uniform essentially because they may have to be used by other Centers. However, many of the results of a Center's operation are not subject to this condition. For instance, grade reporting and attendance accounting are of this type. Beyond the information required for forwarding to state agencies, there is a good deal of latitude in content and format of such reports.

There is every reason for the Regional Centers to offer flexibility in these types of reports. One of the criticisms of the California Regional Centers' services most often mentioned by non-customers during our interviews was the lack of flexibility of the system. Even some trivial changes in output seemed impossible to get at some of the Centers. For instance, a number of interviewees, both customers and non-customers, indicated the value of attendance lists sorted by home room rather than simply alphabetically. Since this was not available, the customers were not given totally adequate services and in some cases did not become customers.

On the surface, this is a question of flexibility, not of uniformity. However, one of the reasons some of the Centers do not offer this particular variation in the output is that they wish to stick to the standard package. In other words, part of the reason is the desire to maintain uniformity. It is true that uniformity would probably disappear rapidly if individual Centers could make such minor changes or even large changes on their own, without coordinating among the other Centers. The example of the non-transferrable tape above indicates what could be expected to happen.

This year most Centers were struggling to provide satisfactory service. In future years, if customer service and responsiveness to customer needs is really the touchstone of the system, minor modifications of this sort should be allowable. Ideally, many such options should be available within the system as programmed. That is, the programs should all contain the various options, so that inadvertant discrepancies from program to program do not creep into the system when small or relatively small change are made in response to customer requirements.

That working reports, like attendance reports, need not be standardized is in strong contrast to the need for uniformity in data files. However, there must be strong controls on variability even in working reports so as to avoid compounding the variation from center to center without meaning to. For instance, uniformity will be better maintained if flexibility is built into programs as options rather than programmed ad lib by various systems. However, this aspect of the problem is really related to the question of how the Data Processing Centers provide results rather than what results they provide. It will, therefore, be discussed at greater length in the following section.

2. Uniformity of Means (Equipment and Programs)

Uniformity of equipment and uniformity of programming are overlapping topics, but are not identical. To some extent the same programs can be run on different computers, especially if the programmer designs the program with this flexibility in mind. On the other hand, it is easier to program for a single computer, because all of that specific computer's special capabilities can be used. The range of special tricks available from a given computer is enormous, and often very helpful in programming. This is true not only when comparing computers from different manufacturers, but even when comparing different models of computers from the same manufacturer, and it is especially important in view of the fact that today in the United States the total cost of putting a computer into operation is made up of more than 50% programming costs. The cost of programming a new system is actually larger than the cost of the hardware, and in our experience the effort devoted to programming has usually remained a major budget item even after the shakedown phase.

So the real question is one of balancing programming difficulties (which can make a given program work on a variety of machines) against the relative ease of programming for a single computer.

The first topic which should be discussed in this regard is the uniformity of computer configurations of the regional centers. At the moment there are six Honeywell computers which are almost identical (one of which is a larger computer), an RCA, and four diverse IBM machines. In addition, two counties are planning to get systems which may or may not be similar to any one of those now in use; but IBM equipment has been considered strongly in both cases.

The system of Regional Centers as originally conceived was intended to make use of similar computers in all centers. It is worth looking at a case example to see why this has not occured. A good example to consider is the Riverside Center, which does not have its own computer but is planning to acquire an IBM system. At present, services to Riverside's customers are processed by Ventura Regional Center, which has been in operation for a longer time than any of the other centers except Sacramento and Los Angeles and is well past its shakedown period. Service is efficent, effective and relatively inexpensive. The Riverside office acts as a staging area and training center for data. The arrangement works well, yet Riverside is going to remove its 20,000 customer students from Ventura, thus significantly reducing the base of Ventura's operations and its viability as a center.

Interviews with Riverside personnel have led to the conclusion that the major factors in the district's decision are political rather than economic. The desire to have a computer system as a base for further service growth seems to be a controlling factor.

In order to pay for the computer, Riverside will have to offer many computer services besides the Pupil Personnel Package, and the result will probably be a great deal of scheduling difficulties. The experience of the regional centers in using machines not dedicated to educational data processing has been diverse. For instance, the Santa Clara Center and the Contra Costa Center both use county machines on a service bureau basis, and customers report a great deal of trouble getting adequate turnaround. In fact, the Director of the Contra Costa Center has indicated to us that they would prefer to have their own computer. On the other hand, San Diego seems to be able to operate the Pupil Personnel Package and payroll package smoothly together. This operation is perhaps more like the Regional Centers' services will be after the business package is available.

From the point of view of cost, these developments cause concern. It should be remembered that when the original IBM centers were getting ready for operation, they contracted with an independent programming firm to have the Honeywell programs revised or rewritten for the IBM equipment. The result was an unqualified failure; the programs provided did not work. A year's disaster in service and a far higher total conversion cost, possibly in the neighborhood of $50,000 including programmer time devoted to emergency repairs on the programs, was incurred. And even then the results were not satisfactory because of the size differences between the IBM system in use and the Honeywell machines, which are rather small. At the moment, for instance, the Santa Clara Center is reprogramming its system, which is finally working, to eliminate program features which waste the core size of the computer in use. This is expected to reduce operating costs, because less computer time will be required; however, this is at the expense of investment in programming. The total of this investment in reprogramming is the cost of the non-uniformity.

Our experience with commercial data processing suggests that this level of difficulty and expense is by no means uncommon. Further problems of this magnitude should be anticipated; they unfortunately tend to occur in both experienced and inexperienced operations.

The option of modifying the system so that it uses only dedicated computers or only identical computers is not a feasible one. Political considerations, especially the combining of educational data processing with other county data processing operations in order to justify a computer, will mean that the Regional Center's system will continue to be a mixed one.

This is a very expensive problem. As noted above, duplicate programming has been unexpectedly expensive. There is no reason at all to suppose that it will become less expensive and every reason to suppose that it will become more expensive.

If the programming can be done just once for use on a number of different computers, substantial savings result. Therefore, means must be sought to encourage this kind of economy. One of the most obvious means of encouraging uniformity is to provide a standard system, programmed centrally, which may be used at minimal cost by those counties or other organizations which have the good sense to avail themselves of the opportunity. This is in effect already being done with the Pupil Personnel Package for Honeywell equipment. The fact that four out of five of the new Centers have not chosen to use the package as it stands may reflect in part the fact that the standard Honeywell configuration does not adequately respond to their needs in context with other applications and with machines available. This is a reflection on the particular configuration rather than on the principle of uniformity. That is, it is possible that a different configuration should be chosen as standard, but the principle is still valid.

There are really two different areas of application of this principle. One is the current system, which will undoubtedly evolve. As noted above, certain options for flexibility within the Pupil Personnel Package probably should be added. The mechanics of making these changes within a uniform system must be considered. However, the second area, that of brand new systems to be added, involves consideration of rather different constraints.

Furthermore, it is not yet clear what population of machines is being discussed. Will the Pupil Personnel and business packages be used only by the ten to twelve computers officially designated as Regional Data Processing Centers? Or should they be designed so that they can be used by a larger group of systems, including some of the educational data processing and county data processing installations now operating?

The organization of a system to maintain uniform computer programs will be deferred to a separate major heading of its own below. At the moment we would like to pursue the question of uniformities within the current system which provide a basis for a uniform system of programs. Certainly the Honeywell machines in use, which are dedicated to educational applications, provide one basis for a uniform system.

However, it is not so clear that the IBM installations provide any basis for uniformity. The most obvious distinction between the two groups, those with dedicated machines are by and large Honeywell machines. The others are IBM systems. It is not clear that the major difference is in manufacturer; there are also differences in the size of the machine and the configuration of equipment. Configuration refers basically to the peripheral equipment available and to the operating system in use. For instance, the San Diego installation is disk oriented. The major problem in converting from a Honeywell machine to the San Diego type installation is not the change in manufacturer but the change in the orientation in systems design.

If a standard configuration which covers a significant part of the potential market for the Pupil Personnel and business packages can be found, this should provide a basis for a uniform package. There is no such uniformity obvious among the IBM centers now in operation. Furthermore it is not clear that these are the appropriate machines to be considered. This question should be pursued and if possible a standard configuration should be supported so as to provide an inexpensive and efficient option to IBM or large system users, as well as to Honeywell users. This means maintaining at least two programming systems. While this represents duplication and is expensive, it is far less expensive than maintaining a dozen separate systems. Organizations not wishing to use these standard systems will incur additional costs. They should bear these costs themselves.

In short, we recommend that the standard Honeywell systems be maintained, and that the possibility of a companion standard system for a large-scale configuration (whether IBM or Honeywell or another manufacturer) be investigated. If this recommendation is acceptable, thought will have to be given to the means of implementing it. Some possible means are discussed in the next section.

B. ORGANIZATION FOR UNIFORMITY

1. Organizing for Changes in Existing Systems

The flexibility and responsiveness to customer needs which was emphasized above must be built into the uniform system or else it may be stifled by that very uniformity. As noted earlier, this seems to have actually happened in some cases. One way of avoiding it is to make firm agreements among the centers within a standard system that possible modifications will be discussed and agreed upon. An obvious vehicle for doing this is the Directors' Conference. The Directors' Conference could vote upon changes to be made and, having agreed upon changes which should be made, could assign the systems design and basic programming to one of the Centers. The Center doing this work should, of course, be paid for the service by the other centers. A pro rata system based on the number of students served might distribute the cost equitable; contractual agreements between the center doing the work and the other Centers which will use the revision can help to smooth this process. Furthermore, an arrangement of this type permits school districts which use the package but are not Regional Centers to benefit as well; this ensures that improvements in the package (developed with state and federal funds) is potentially beneficial to all in the state, and not only differentially to the Regional Centers.

When the systems analysis is done and a new program package is ready, it can be distributed from the center which has done the work to the others. There, maintenance programmers will need to perform some work to put the modifications to work whether they are program changes or additional sub-routines or new programs. The cost of this maintenance programming, and the speed at which it can be done, are expected to only partially offset the savings gained from central programming. In addition, central programming supports and emphasizes the uniformity of the system.

Program packages (i.e. actual program decks, binary run tapes, documentation, and listings) should probably be provided by a central source to new centers for the same reason. The most logical place for this central source is, of course, in the State Department of Education. This again will prevent the accumulation and dissemination of minor changes, which can snowball into major changes if unchecked.

2. Uniformity in New Systems

Brand new systems, such as the business system now under discussion, should be programmed centrally for any systems or computer configurations which are supported. The systems in use should be supported in the same way that manufacturers support many of the programs that they provide. This applies to both the programs and packages now in use and to new packages as they are created, like the business package.

Publicity concerning the characteristics of systems which will be supported should be emphasized before programming begins. This will give time for reactions from people with machines who may not quite fit the system but who should be accommodated. Furthermore, it may have an influence on future computer acquisitions in districts which don't have their own equipment (such as San Francisco and Riverside).

Then systems analysis and programming should be done centrally for the systems which are supported. Documentation should be well above the level now reached; it should be at the level reached in the best industrial programming departments. Documentation is very difficult to provide in an atmosphere of operation. Crises are too frequent to permit the apparent low priority work on documentation.

The result of central programming should be program decks which can be distributed and used by people with conforming systems. These programs should be written in such a way that the widest possible variety of systems will conform. For instance, basic COBOL programming, compatible with most machines, should be used even at the expense of programming difficulty. Furthermore, attention should be paid to the problem of machine size. To some extent program incompatibility with a given machine results from size considerations.

For instance, one of the reasons that the original IBM version of the Pupil Personnel Package was not acceptable to the Contra Costa installation was that it was designed to process one school district at a time. This was extremely wasteful on the large computer being used, which was capable of processing many schools at once. Therefore reprogramming had to be done.

The result is that programming flexible with regard to size should be attempted. To some extent array and table sizes, blocking factors, and the like can be left changeable so that a system can fit the number of students or records to be processed at once and make more efficient use of its machines. Further technical investigation of this point will be required to determine if this is the major consideration related to size.

C. SUMMARY AND LOOK AHEAD

In sum, we recommend flexibility in working reports, standardization of data files and other re-usable products of the system, and the organization of the system so as to support uniformity of equipment and programs.

It is certain that the advent of CEIS will influence standardization as well as costs within educational data processing. Since CEIS will impose uniform data requirements on the entire state, it seems likely to be a force favoring uniformity of data files at least. The data processing centers can provide CEIS acceptability to schools if their services are available at an acceptable price. Every effort should be made to see that they are, and one of the major cost factors will be uniformity.

V. FUNDING OF REGIONAL DATA PROCESSING CENTERS

There is a fundamental difference between the type of funding we recommended for on-going aspects of the system and for new extensions to the system. In general, the former should be self-supporting (as they are for the most part today), while the latter should be contributed to by outside sources.

For instance, the cost of operations (computer time, materials and supplies, salaries of center personnel, etc.) should be paid for by charges to customers. This includes the salaries of maintenance programmers, whose work is actually part of operations rather than of system development.

On the other hand, extensions of the Pupil-Personnel Package and the design and programming of the new systems such as the business package should be financed at the central level. This implicitly assumes acceptance of our recommendation that the system be designed to be useful to a wide range of users. In this case, State funding is appropriate, as well as funding from Federal sources. For instance, the Elementary and Secondary Education Act (ESEA) Title V, is aimed at supporting and extending State Department of Education functions. Obviously, this system of data processing, especially in association with CEIS, falls into this category and qualifies for Title V consideration. Title III funds should continue to be considered for support in further increasing the usefulness of Pupil Personnel services to local school districts, and for other innovations with direct benefit to local school districts, such as the business system. Similarly, Title X of the National Defense Education Act (NDEA) should be considered here, since its mission is to improve statistical services within the State Education Departments. We recognize that funds in both cases are extremely limited and mostly precommitted. However, this should not permanently eliminate consideration of these funding sources.

Whether or not the Federal inputs are available, State-level financing is appropriate for additions to the system. If the Federal money is not available, legislative action may be appropriate to provide funding. This will not be done unless wide-spread support for the system is evident; and that is dependent upon the breadth of potential usefulness emphasized above.

All of the Regional Data Processing Centers are being subsidized to some extent. Direct subsidies include county school service funds, which are allocated from the state to the county; any remaining Title III funds (these will all be exhausted during the current year); and direct transfer of funds from the county supervisor's budget. In addition to these direct subsidies, which are used for operating expenses, salaries, and the like, there are other indirect subsidies. Most of the computer centers receive space and utilities free, and a certain amount of nonallocated supervisory time. Thus, the Regional Data Processing Centers cannot be considered as "profit making" activities, nor for that matter are they yet at break-even.

Virtually all Data Processing Centers have responded to these financial pressures by raising the charges for services, generally of the order of a dollar per student per year. In virtually all instances, customers have accepted these increased charges, although not without some apprehension that they may be raised further. In any case, the Centers appear to be by and large viable with the subsidies which the county superintendent's office allocates, especially after the first year or two of operation.

There is a very general feeling that the state should play a more direct role in providing subsidies to the Regional Data Processing Centers. The argument is frequently made that much of the information that is being developed by the Centers is needed by the State Department of Education in its overall role in State decisions.

It is generally recognized that if the state were to contribute in any meaningful way financially, this would probably be accompanied by a higher level of state-imposed uniformity on these systems. In fact, it was frequently suggested that the state ought to take a much stronger role in terms of encouraging uniformity in procedures and systems, and that the carrot that the state could use would be a financial one -- direct subsidies to conforming Centers.

As discussed elsewhere, in this report, one vehicle for this subsidy may be the CEIS. This could provide opportunity for the State to subsidize agencies which spend part of their resources in gathering, editing, summarizing, and providing CEIS information to the State. In fact, these agencies could well be the Regional EDP Centers, or a subset of these Centers.

Another possible vehicle for subsidizing the Regional Centers is to take advantage of the programming staff available within the Centers. The State could contract with the Regional Centers to do programming for systems whose development and systems analysis took place at the State level.

Another method for increasing the funds available to the Regional Center, is to expand the operations of the Center. This can be done in any of the following three ways:

1. Expand the number of students served. It is clear that most Centers could expand the number of students served by 50 to 100 percent with only a modest increase in budget. A few more personnel would be needed, and the computer configuration in some cases would require moderate expansion. For those Regional Centers renting time on a county machine, of course, the expenses will go up more nearly proportional to the number of students served.

2. When the state sponsored business service package becomes available, in about two years, this will provide an integrated set of services to the clientele which will increase computer utilization and income without significantly increasing the load during the critical periods, that is, during grade reporting and school scheduling. These Centers will also be able to provide these services without a proportionate increase in their staff. To some extent, of course, these services will merely take the place of programs that are currently being run by the Regional Centers. Overall, however, the availability of this business services package is expected to increase income to the Regional Centers.

3. Some of the Centers have already initiated programs aimed at providing other services to educational institutions and personnel. These include statistical and research applications, for special projects, that is, FORTRAN programs in batch mode for instructional purposes, and some business applications. In the future, some of these applications are expected to increase rapidly as the Pupil Personnel Package presents fewer and fewer operational problems. In New England, for instance, consultants supplied by the computer manufacturer have gone to secondary schools to help initiate programs of computer instruction, resulting in increased computer utilization at the Center.

In the past, the secondary school market has been the primary market for the Regional Centers, both from the number of students served and to a greater extent through the income received per pupil. The income per pupil is approximately $4.00 per student, whereas for a primary student the services are significantly less and the income is about $1.50 per student.

Since the market penetration at present is less in the elementary grades, there is greater opportunity for increasing the number of students served by the Regional Centers.

These factors all point to a steadily improving financial picture. With aggressive action by the Centers, it should be possible to increase the number of students served and increase and improve the services provided to the district, without directly proportional increase in their cost. Countering this trend, some of the larger school districts which are now customers may decide to acquire computers of their own. To a certain extent this will be unavoidable as some districts will decide that any increased costs will be more than offset by the improved control and individualized services they will be able to achieve on their own computer. However, with an increasingly smooth operation in the Centers, maintaining their services at a competitive cost, and with aggressive salesmanship, the Centers should be able to more than offset this trend by increasing the number of students served and the number of services provided to the district.

To summarize, the Regional Data Processing Centers do appear to be financially viable at the moment, so long as the affiliated counties continue to provide the necessary limited amount of subsidy. It appears that in general finances will continue to be an operating problem, although the financial picture should slowly improve as new services are offered, and as market penetration increases. This will depend partly upon the system's success in producing new packages in a widely useable form.

APPENDIX A

Tables

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TABLE 1

ELEMENTARY AND SECONDARY SCHOOL POPULATIONS, SPRING 1968

Regional Center	Service Area*	Elementary	Secondary	Total
Central Valley	Alpine*	63	33	
	Fresno	70,951	37,920	
	Kings	12,603	4,141	
	Madera	7,832	2,730	
	Mariposa	800	339	
	Merced	21,585	8,651	
	Mono*	548	213	
	Stanislaus	33,190	12,648	
	Tulare	34,991	12,611	
	Tuolumne*	3,184	1,306	
	Total	185,747	80,592	266,399
East Bay	Alameda	141,313	80,941	
	Contra Costa	85,743	55,253	
	Total	227,056	136,194	363,250
Kern	Inyo*	2,761	1,089	
	Kern	63,945	24,281	
	Total	66,706	25,370	92,076
Los Angeles	Los Angeles	873,701	542,211	1,415,912
Northwest	Del Norte	2,928	1,130	
	Humboldt	16,312	8,626	
	Lake	2,456	1,256	
	Marin*	31,117	13,767	
	Mendocino	7,748	4,504	
	Modoc	1,592	712	
	Napa	9,429	6,849	
	Siskiyou	5,617	2,612	
	Sonoma	27,732	17,327	
	Trinity	1,441	423	
	Total	106,372	57,206	163,578

* Original service areas as planned prior to ESEA Title III application.

TABLE 1 (Continued)

Orange	Orange	223,097	107,467	330,564
Sacramento	Amador	1,709	768	
	Butte	14,738	8,058	
	Calaveras	1,937	842	
	Colusa	2,015	1,030	
	El Dorado	7,523	2,933	
	Glenn	3,582	1,563	
	Lassen	2,938	1,274	
	Nevada	3,335	1,448	
	Placer	13,550	5,883	
	Plumas	1,626	1,407	
	Sacramento	99,434	56,850	
	San Joaquin	42,499	22,850	
	Shasta	14,455	5,690	
	Sierra	447	235	
	Solano	26,503	13,145	
	Sutter	10,871	3,700	
	Tehama	5,211	2,181	
	Yolo	12,944	5,807	
	Yuba	6,526	1,979	
	Total	271,843	137,643	409,486
San Francisco	San Francisco	51,941	39,944	91,885
San Mateo	San Mateo	83,596	35,938	119,534
Santa Clara	Monterey	33,135	18,634	
	San Benito	3,077	1,197	
	Santa Clara	182,806	71,909	
	Santa Cruz	17,666	8,284	
	Total	236,684	100,024	336,708
Ventura	San Luis Obispo	13,546	6,932	
	Santa Barbara	36,813	21,308	
	Ventura	64,141	27,534	
	Total	114,500	55,774	170,274
Riverside	Imperial	17,332	5,620	
	San Bernardino	105,629	56,079	
	Riverside	64,088	34,865	
	Total	187,049	96,564	283,613
San Diego	San Diego	172,519	97,307	269,826
	Grand Totals	2,800,811	1,512,234	4,313,045

TABLE 2

MARKET POTENTIAL

TOTAL ENROLLMENT IN THOSE DISTRICTS WITH LESS THAN 20,000 STUDENTS*

SPRING 1968

Regional Center	Elementary (000)	Secondary (000)	Total (000)
Central Valley	154.2	56.7	210.9
East Bay	138.0	111.5	249.5
Kern	66.7	25.4	92.1
Los Angeles	463.1	244.7	707.8
Northwest	75.3	43.4	118.7
Orange	184.9	76.7	261.6
Riverside	165.6	96.9	262.5
Sacramento	207.0	117.0	324.0
San Diego	101.3	48.8	150.1
San Francisco*	52.0	40.9	92.0
San Mateo	83.6	35.9	119.5
Santa Clara	194.3	100.0	294.3
Ventura	114.5	55.7	170.2
Totals	2,000.5	1,053.6	3,054.1

* Districts with more than 20,000 students are included if they are currently subscribing to Regional Center services.

TABLE 3

NUMBER OF PUPILS SERVED (000) 1967-68

	Central Valley	East Bay	Kern	Los Angeles	Northwest	Orange	Riverside	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara (inc. San Francisco	Ventura (inc. Riverside)	TOTALS
Secondary Pupils														
Basic CEIS package	45	26			28		21	56	19	16		47	53	274
Scheduling			16	15				75			27	10		143
Attendance accounting											12			12
Testing	50		7	200	20			10			22		12	321
Mark reporting			15	10							27	30		82
Elementary Pupils														
Basic package	10			3	14		2		16			3	41	87
Scheduling			35								3			38
Attendance accounting			35											35
Testing		2	65	200	30			20			3	15	18	353
Mark reporting											6			6

TABLE 4

APPROXIMATE EXPENDITURES OF REGIONAL CENTERS FOR PUPIL PERSONNEL SERVICES

1967-68

1. Centers with Dedicated Computers	
Central Valley	$142,000
Los Angeles	12,000
Northwest	193,000
Sacramento	308,000
San Diego	159,000
San Mateo	135,000
Ventura	177,000[1]
2. Centers Sharing County Computers	
East Bay	171,000
Kern	84,000
Santa Clara	241,000[1]
3. Centers without Computers	
Riverside	80,000[2]
San Francisco	138,000[2]
Total (adjusted for footnotes 1 & 2)	$1,716,000

1. Includes expenditures for satellite center processing.
2. Includes payments made to computer processing centers.

TABLE 5

COMPUTING EQUIPMENT EMPLOYED BY CENTERS AS OF JUNE 1968

Regional Center	Computer Make and Model	Years in Operation as Regional Center
Central Valley	H200 16K 5 Tape	2
East Bay	IBM 360/40 132K 9 Tape 3 Disc	1
Kern	IBM 360/30 64K 7 Tape 4 Disc	2
Los Angeles	H200 40K 6 Tape	1
	RCA 301 20K 6 Tape	-
Northwest	H200 20K 5 Tape	1
Orange	None	
Riverside	Uses Ventura	
Sacramento	H2200 65K 6 Tape 3 Disc	3
San Diego	IBM 360/30 32K 2 Tape 3 Disc	1
San Francisco	Uses Santa Clara	
San Mateo	H200 32K 5 Tape	2
Santa Clara	IBM 360/40 128K 10 Tape 2 Disc	1
Ventura	H200 20K 5 Tape	3

Summary

RCA 301	1
H200	5
H2200	1
IBM 360/30	2
IBM 360/40	2
	11

TABLE 6

STAFFING OF REGIONAL CENTERS

Regional Center	Systems Analysts	Programmers	Coordinators
Central Valley	1/2	2	1
East Bay	1/2	1/2	1
Kern	1/2	1/2	1/2
Los Angeles	-	1/4	1/2
Northwest	1	1	1
Orange	-	-	-
Riverside	-	-	-
Sacramento	1/2	2	2
San Diego	1	2	1
San Francisco	-	-	1
San Mateo	1	1	-
Santa Clara	-	2	1
Ventura	1/2	1/2	1

TABLE 7

PRICES CHARGED BY REGIONAL CENTERS FOR A PUPIL PERSONNEL PACKAGE*

	Secondary Schools		Elementary Schools	
Regional Centers	1967-68	1968-69	1967-68	1968-69
Central Valley	$3.00	$4.00	$1.50	$1.75
East Bay	3.00	4.00	-	-
Kern	3.20	3.20	1.20	1.50
Los Angeles	-	3.00	1.50	1.50
Northwest	3.00	4.00	1.00	1.50
Riverside	3.00	3.50	1.25	1.25
Sacramento	2.50	3.00	1.50	1.50
San Diego	3.00	3.50	1.00	1.50
San Francisco	3.50	4.67	-	-
San Mateo	2.90-4.00	2.90-4.00	-	-
Santa Clara	3.00	4.25	-	2.00
Ventura	3.00	3.50	1.00	1.25

* This table must be interpreted with care as there are variations in the package offerings from Center to Center. Charges also vary for differentiated services. Services increased during period. Charges were based upon projections of costs and adjusted with experience.

TABLE 8

CALIFORNIA EDUCATION INFORMATION SYSTEM - PUPIL PERSONNEL SUBSYSTEM SERVICES

Contents of the CEIS Pupil Personnel Package Offered in 1967-68

	SECONDARY											ELEMENTARY										
	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura
A-1	x	x	x		x	x	x	x	x	x	x									x		
A-2	x	x	x		x	x	x	x	x	x	x									x		
A-3	x	x	x		x	x	x	x	x	x	x									x		
A-4	x	x	x		x	x	x	x	x	x	x									x		
A-5	x	x	x		x	x	x	x	x	x	x									x		
A-6	x	x	x		x	x	x	x	x	x	x									x		
A-7	x	x	x		x	x	x	x	x	x	x									x		
A-8	x	x	x		x	x	x	x	x	x	x									x		
A-9	x	x	x		x	x	x	x	x	x	x									x		
A-10	x	x	x		x	x	x	x	x	x	x			x	x					x	x	x
A-11	x	x	x		x	x	x	x	x	x	x									x	x	
A-12	x	x	x		x	x	x	x	x	x	x			x	x					x	x	x

Student Scheduling

A-1 Preliminary Course Request Roster (course listed alphabetically by student)
A-2 Conflict Matrix
A-3 Course Request Verification (each student)
A-4 Tally of Course Requests (course count)
A-5 Simulation Runs (one or two)
A-6 Student Conflict Report (with each simulation
A-7 Class Load Report and scheduling run)
A-8 Final Scheduling Run
A-9 Locator Cards (student programs) (three times a year)
A-10 Teacher Class Lists (temporary & permanent) (three times a year)
A-11 Master Course Directory (up to eight times a year)
A-12 Alpha List by Student (one by school - one by grade)

	SECONDARY											ELEMENTARY										
	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura
B-1	x	x			x	x	x		x	x	x	x		x	x	x		x			x	x
B-2	x	x			x	x	x		x		x	x		x	x	x		x			x	x
B-3	x	x			x	x				x	x	x		x	x	x					x	x

	SECONDARY											ELEMENTARY										
	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura
C-1	x	x	x			x	x	x	x	x	x	x		x				x		x	x	x
C-2	x	x	x		x	x	x	x	x	x	x	x		x	x	x		x		x	x	x
C-3	x	x	x		x	x	x	x	x	x	x	x		x	x	x		x		x	x	x
C-4	x	x	x		x	x	x	x	x	x	x	x		x	x	x		x		x	x	x
C-5	x	x	x		x	x	x	x	x	x	x	x		x	x	x		x		x	x	x
C-6	x	x	x		x	x	x	x	x	x	x	x		x	x	x		x		x	x	x

Attendance Accounting

B-1 Attendance Register (monthly listing of individual pupil sttendance)
B-2 Attendance Summary (includes school month ADA by attendance category, by grade, school & district)
B-3 Irregular Attendance Report (monthly)

Testing (Aptitude & Achievement Batteries for Two Grades)

C-1 Answer Forms
C-2 Scoring of Tests
C-3 Lists of Test Results
C-4 Pressure Sensitive Test Result Labels
C-5 Frequency Distributions & Norms (by school, by grade, for each test)
C-6 State Report for State Required Tests

	SECONDARY											ELEMENTARY										
	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura
D-1	x	x	x		x	x	x	x	x	x	x									x		
D-2	x	x	x		x	x	x	x	x	x	x									x		
D-3	x	x	x		x	x	x	x	x	x	x									x		
D-4	x	x	x		x	x	x	x	x	x	x									x		
D-5	x	x	x		x	x		x		x	x											
D-6	x	x	x		x	x	x	x		x	x											
D-7	x	x	x		x	x	x	x	x	x	x									x		
E-1	x	x			x	x		x		x	x											

Subject Mark Reporting (Four or Six Marking Periods per Year)

D-1 Student Report Cards
D-2 Scholarship Report (teacher class mark lists - each marking period)
D-3 Mark Analysis (by department, by course, by teacher - each marking period)
D-4 D.F.I. Report (each marking period)
D-5 Mark Point Average by Rank (each marking period)
D-6 Mark Point Average, Alphabetically by Grade (each marking period)
D-7 Pressure Sensitive Mark Report Labels (each semester) (one set)

California Guidance Record

E-1 A complete record of all pertinent information for each student updated each semester. The record includes current subjects taken and marks received - latest achievement and ability test scores - a cumulative record of subjects with marks by department and including mark point average - overall mark point average. State college MPA and rank in class. The record may also serve as a transcript.

	SECONDARY											ELEMENTARY										
	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura	Central Valley	East Bay	Kern	Los Angeles	Northwest	Sacramento	San Diego	San Francisco	San Mateo	Santa Clara	Ventura
F-1	x	x	x			x	x	x	x	x	x	x		x	x			x		x	x	x
F-2	x	x	x								x										x	
F-3	x	x	x		x	x	x	x		x	x	x		x	x	x		x			x	x
F-4	x		x			x				x	x	x		x							x	x
G-1	x				x	x					x											
H-1	x	x	x		x	x	x	x		x	x	x		x	x			x			x	x

Additional Output Reports - including:

F-1 Student Name & Address Labels (twice a year)
F-2 Updated Master Teacher Schedule (each marking period)
F-3 Current Student Data Transmittal Forms, Including Updated Revisions
F-4 Ethnic Report

Maintenance of California Guidance History File, Including Summer School (as defined by Department of Education)

G-1

Maintenance of Student Master File (as defined by Department of Education)

H-1

APPENDIX B

A. QUESTIONS RELATED TO THE DATA PROCESSING CENTERS

1.1 Is there greater cost effectiveness involved in the operation of one central installation in a region rather than another type of organization or composition of an installation or installations?

1.2 Is there a difference in the level of central staff competency associated with these data processing centers in a regional system than is possible in other types of data processing agencies, such as school district, county, university, or private organizations serving this field?

1.3 What are the desirable limits in uniformity in the procedures and in the products of these regional centers? In what ways are these different from those limits which are possible under other arrangements and through other agencies whose function is also data processing in this state?

1.4 Is there provision for the adequate funding for data processing by the agencies and/or districts which require and utilize the data at the local, the regional, and the state levels? What should the fair share of the associated and the direct costs of this processing be for the distribution of funds toward this production itself as opposed to costs for work in systems analysis and in the development of programs to provide more flexibility and individual options by these users?

1.5 What provision should there be for adequate, effective safeguards for the integrity of the participating districts and/or agencies in the availability of and in the treatment of the data as it is processed and is transmitted in the system? To what degree has this protection been achieved at this state of development of the system(s)?

2.1 Is the basis for grouping of the clients and prospective clients for these data processing centers adequate for the defined program?

2.2 To what extent do the various cooperating agencies and/or districts involved in a regional system make and implement valuable suggestions to the developments and to the changes of the system itself?

B. ANSWERS

1.1 The data we have gathered and analyzed indicates that there definitely is greater cost effectiveness involved in the operation of one central installation in a region than there would be in the operation of, for instance, a master center to do the types of work which require a large-scale computer (such as scheduling), associated with a larger number of "satellite" centers with small data-editing computers. The reason for this is basically that the step from a small data-editing computer to one capable of doing the whole job turns out upon investigation to be a rather small one. Furthermore, to the surprise of many people involved in the study, distance considerations seem to play a relatively small part in the effectiveness of a center's operations. For instance, some customers are separated from their centers by hundreds of miles, and yet obtain very satisfactory service. This does not seem to be an isolated phenomenon or one restricted to California; the same has been observed in New England.

The major restriction on the size of an area seems to be the availability of consulting services during the first year or two of operations. During this period many administrative procedures must be worked out, and a great deal of learning must take place, especially concerning data control procedures. This is only somewhat more difficult at large distances. The interest and deep involvement of one or a few individuals in the school district are much more critical factors in the success of the project. On balance, even the largest data processing regions are not too large to be adequately serviced by a single center.

1.2 The level of staff competency in the regional data processing centers is on a par with the competency of industrial and commercial personnel in corresponding positions. There is somewhat greater turnover in personnel, but this is expected to stabilize as the system goes beyond the first year of operation in most centers. In some cases the application of county pay scales and procedures to data processing personnel has resulted in (1) lower salaries being offered to data processing personnel than they would receive for equivalent work in industry; and (2) the inability to hire some personnel.

This factor has been offset by the willingness of people to work in education even at some sacrifice, and on balance the personnel seem adequate for their positions. We feel it would probably be worth the additional expense to pay competitive salaries, but we do not think that drawing staff from outside of education would be an improvement. One of the major strengths of the centers is that the administrators and line personnel have usually had experience in education, even in the case of some non-certificated personnel who have been associated with county offices over the years. This is a major strength within the system; it should be maintained.

1.3 Our major conclusion on uniformity is discussed at length in Chapter IV. We feel it is desirable to have a high degree of uniformity in files and other items communicated either among the centers or between the centers and other data processing institutions. There should be alternate means of processing these files (alternate computer program systems) suitable for use on different types and sizes of computer configurations. In addition, there should be as much flexibility as possible in working reports such as grade reports and attendance reports. These reports need be standardized only insofar as they must be forwarded to state or other agencies which require uniformity. There seems to be little reason not to provide various types of summaries and sorting where required. On the other hand, the main categories of data in the basic files should not be altered, though they may be supplemented by further information, as in the case of more detailed grade reporting.

1.4 We recommend that operating expenses including the actual production of files and reports and the necessary maintenance programming be paid for by charges to users. The cushion provided by the home county of each center, in the case of temporary deficits, is adequate as a safeguard and has, in fact, been very useful to the centers.

In contrast we feel that development costs should be borne by the people who may potentially benefit from the systems being developed. If programs are written in such a manner as to be useful to a major section of California education, then state funding of program package development is appropriate. Insofar as developments are innovative, we believe that federal funding can be applied. In either case it is important that development of package extensions and additions be done at a central place in a uniform manner for use on as wide a variety of systems as possible. This type of development is more expensive initially than is development of systems tailor-made to individual machines, but it is much less expensive in the long run. The same is true of options requested by localities. Insofar as these options are changes in basic system or package programs, they should be decided upon and implemented at a central level. Control of the system's make-up should not be allowed to vary haphazardly from one group to another.

1.5 The provisions for adequate and effective safeguards of the integrity of information of the participating districts are not at present sufficient. As soon as possible the centers should adopt strong written policies stating that the data in their files is the property of the school districts involved and cannot be divulged to any other party except at the written request of each district. This position should be upheld except where it is in conflict with legislation.

2.1 The basis for the grouping of clients and prospective clients is adequate. It is desirable for customers within a geographical region to make use of a single data processing center. However, there seems to be no reason to enforce this rule rigidly. Under the current arrangement, a regional center must approve a second center's supplying services to one of the school districts within his own region. This seems to be working well and should be continued.

2.2. It is still too early to tell how extensive valuable suggestions from cooperating agencies and districts may become. For the majority of the centers, this is the first or second year of operation, and their major attention has been concerned with operating crises. Their efforts have focused on making the system work at all, rather than to improve upon it, except in the case of the older centers. Only minimal improvements and changes have been suggested, partly out of reaction to the severe implementation troubles (which have promoted a resistance to changing the system), and partly out of cost considerations. In Chapter IV we have recommended means of achieving greater flexibility in the system and of implementing improvements while maintaining uniformity.